AM Asset Management System Administration

This manual illustrates the business-related functions of the R/3 System AM (Asset Management). Asset Management consists of several components. The components enable you to carry out the functions of traditional asset accounting, investment controlling, and the technical management of assets for the purposes of plant maintenance. This manual describes the ways in which the System can be configured, and demonstrates how the AM System can be modified to reflect your needs. The Implementation Guide (IMG) describes the actual process of setting up the system. A User Guide describes how to handle the system once it has been set up.

The following help topics are available in this manual:

General Introduction to the Application

Organizational Structures

Structuring the Assets

Fixed Asset Depreciation

Special Valuations

Fiscal Years and Periods

Posting Procedure

Business Transactions

Old Assets Data Takeover

Periodic Processing

Analysis of Fixed Assets

Reporting Procedure

Individual User Modifications

Glossary

For Help on Help, Press F1

Version
Copyright

Version

Prepared for R/3 Release 2.2.

July 94

Copyrights

©1994 SAP AG. All rights reserved.

Neither this documentation nor any part of it may be copied or reproduced in any form or by any means or translated into another language, without the prior consent of SAP AG.

SAP AG makes no warranties or representations with respect to the content hereof and specifically disclaims any implied warranties of merchantability or fitness for any particular purpose. SAP AG assumes no responsibility for any errors that may appear in this document. The information contained in this document is subject to change without notice. SAP AG reserves the right to make any such changes without obligation to notify any person of such revision or changes. SAP AG makes no commitment to keep the information contained herein up to date.

General Introduction to the Application

The basic characteristics of the AM System are described in the following topics.

Range of Functions in the AM System

Country - and Company - Specific Characteristics

System Installation Procedure

Range of Functions in the AM System

Components

The AM System is used for managing and supervising the fixed assets within the R/3 standard software. It consists of the following component parts:

- Traditional Asset Accounting (AA)
- Investment Control (IC)
- Technical Asset Management and Plant Maintenance (EQ)

The Asset Accounting component encompasses the entire lifetime of the assets from purchase order or the initial acquisition, possibly managed as an asset under construction, up to the retirement. To a large extent the system automatically calculates the values for depreciation, interest, insurance and for other purposes between these two points in time, and places this information at your disposal in varied form online, on paper or on other data media. Planned investment management for predicting depreciation and for controlling purposes, as well as line item management and settlement of assets under construction, is possible using the IC component.

The component EQ offers special functions for the technical management of assets in the form of functional locations and as equipment. A detailed explanation of these aspects can be found in the documentation for the R/3 PM (Plant Maintenance) System.

Integration

Via integration in the R/3 System, AM copies data from other systems as well as passing on data to other systems. For example, it is possible for posting in the MM (Material Management) System to be carried over directly into AM. When an asset is purchased or produced in-house, the invoice or goods receipt, or the transfer of goods from the warehouse, can be directly posted to AM. On the other hand, you can pass on depreciation and interest directly to Financial Accounting (FI) and Cost Accounting (CO). You can also settle maintenance activities that require capitalization from the PM (Plant Maintenance) system to assets.

Country - and Company - Specific Characteristics

The R/3 AM System is intended for international use in many countries, irrespective of the nature of the industry. This means, for example, that no country-specific valuation rules are predefined. You give the system its country-specific and company-specific character using Customizing.

Default Settings

To minimize the time and energy that this would require, the country-specific defaults are delivered with the system where possible. These already contain all table entries that are generally necessary in order to carry out most valuations. When configuring the system, you often only need to select those entries, which are actually needed in your company.

The system currently comes without an asset class catalog, since it is our experience that this varies greatly from company to company, and since many companies already have classification systems that the AM System can take over and use as asset classes.

Customizing

You can, of course, define new rules if required. You are guided through a customizing menu, which will present logically connected configurations for you to maintain. These configurations are organized in a logical sequence along business lines.

System Installation Procedure

When installing the AM System you should read this manual first for information on the business functions and possible settings in the system.

You carry out the actual configuration in the Customizing menu. You find this menu in the general menu under *Tools*. Under Customizing, you can select *Configuration* or *Implementation guide*.

Implementation Guide

By choosing *Implementation guide* you come to the so-called Implementation Guide (IMG). The Implementation Guide also contains a manual for Asset Accounting. In the Asset Accounting guidelines, the steps necessary for setting up the system are described in the order in which they would logically be carried out. The structure of the IMG corresponds to the structure of the Customizing menu. This means that there is a topic in the Implementation Guide for each Customizing transaction. You can branch directly into the corresponding customizing transactions from the IMG, in order to actually begin configuring the system. Using the Hypertext link, you can also branch directly to explanations in the corresponding topics of the AM System Administration Guide. In addition, you can save your own notes in each topic regarding the progress of the project.

Customizing menu

The Asset Management Customizing menu is structured so that, in order to configure the system, you can work through the menu from left to right and from top to bottom. We recommend this if you want to test the functions as soon as possible in the system. You can already carry out master data maintenance, for example, after working through the menu items *Environment*, *Valuation* and *Master data* even if the points *Transactions* and *Reporting* are not yet worked through.

You can, of course, also call up any menu items at any time directly, if you want to make changes to the configurations. However, there are some basic specifications which you can no longer change once the system is productive (that is when old assets data takeover is complete). This is noted in the corresponding topics in this manual. Other settings, which typically depend on frequently changing external demands, can be changed easily in the system. New depreciation keys can be set up at any time, for example.

Organizational Structures

In addition to its actual task of evaluating the fixed assets, Asset Accounting must also be able to represent the organizational structure of a company. The system supports the following SAP organizational structures:

- Company code
- Business area
- Plant
- Cost center

An asset is always specifically allocated to these organizational units. At the same time, an asset can be transferred within a company across these organizational boundaries. The system recognizes and supports this.

The following describes the essential organizational structuring options from an Asset Accounting point of view.

Company Code

Business Area

Plant

Cost Center

Chart of Accounts

Chart of Depreciation

Depreciation Area

Derived Depreciation Area

Characteristics of a Depreciation Area

Standard Depreciation Areas U.S.A.

Standard Depreciation Areas Germany

Currencies

Authorization

Company Code

The company code represents a legally independent unit. For every company code, a year-end closing is drawn up in Financial Accounting according to the legal specifications. Therefore, you can run all reports for assets per company code. For corporate groups, you can also run reports including several company codes or all company codes.An asset is always assigned to only one company code. You must always enter a company code when creating an asset. Asset Accounting uses the same company codes as Financial Accounting. However, you must further define these company codes with the specifications needed for Asset Accounting. Only when you define these company codes in AM Customizing are they of any use to Asset Accounting.

Status

The status of a company code can be defined as follows:

- Test status: You can change the values by old assets data takeover or posting.
- Implementation status: You can enter and change values by old assets data takeover. Posting is not possible.
- Production status: Old assets data takeover is finished. You can only change values by posting.

Other system settings

In addition, you can also make the following specifications in Asset Customizing at the company code level:

- company code for number assignment (for number assignment across company codes)
- fiscal year version
- depreciation area for net worth tax
- document type for posting depreciation
- settlement profile for the settlement of assets under construction
- various control indicators

The following figure shows an overview of specifications for a company code in Asset Accounting:

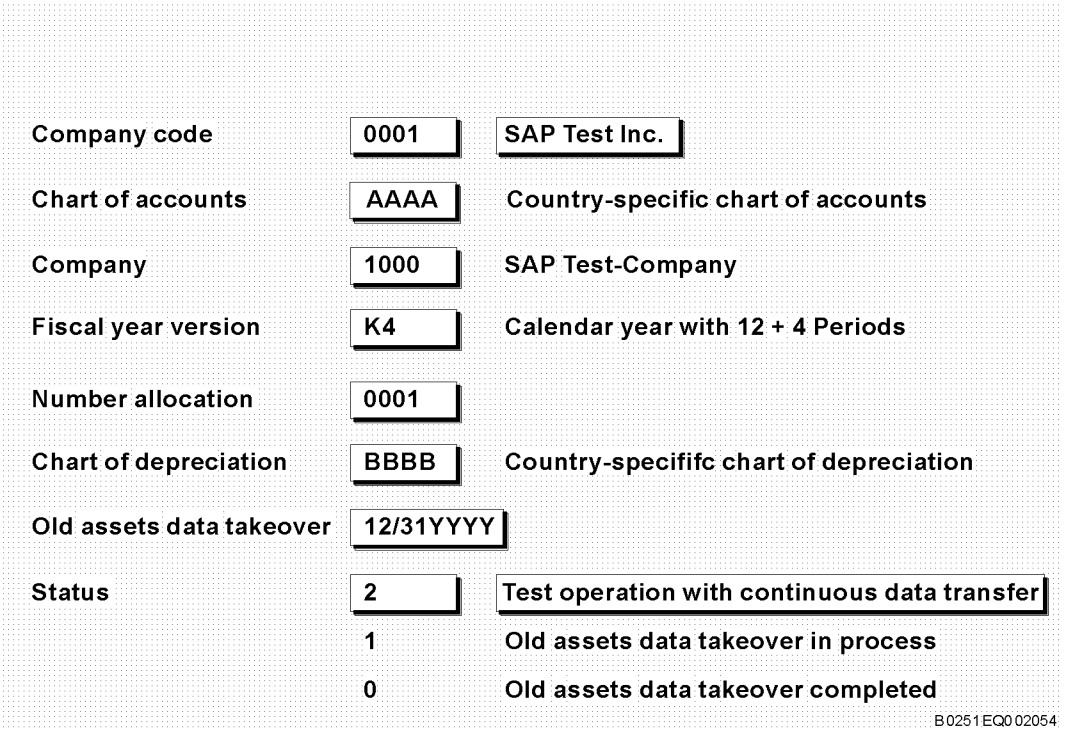


Fig. Company code definition for Asset Accounting

Old data takeover

There is a special Customizing transaction for making various specifications per company code and depreciation area for old data takeover see the topic Takeover Options .

Transfers - evaluation

For the transfer of fixed assets between different company codes, there is a special procedure, which is described in the topic Transfer Posting Between Two Affiliated Companies

Further Organizational Structures

In addition to the company code, you can set up different organizational units for internal reporting purposes. You can make a specific allocation of an asset (partially time-dependent) to these organizational units. There are separate master data fields for assigning assets to these organizational units.

Business Area

If you create business area balance sheets in Financial Accounting for a company code, the system requires that assets be allocated to a business area during master record maintenance. The business area can also be transferred automatically from the cost center that was entered. Providing a fixed asset is allocated to a business area, all postings to this fixed asset are assigned to this business area, including depreciation and profit or loss postings on an asset retirement.

You can only make time-dependent allocations of an asset master record to different business areas if no business area balance sheets are created. If you want to allocate a fixed asset that has already been posted to another business area, you must transfer the fixed asset to a new asset master record. The posting becomes effective at the same time in the General Ledger.

Plant

The meaning of the organizational unit "plant" is specified in the logistics systems of SAP software. Generally, it is a plant location or branch. The plant has no accounting or costing relevance, but it can can be used as a sort criterium for evaluations.

You can allocate a fixed asset to a plant for a set time. By changing the master record, you can change the allocation to a different plant, which will occur on the exact date you specify. The system stores the change history as long as you want.

Cost Center

A cost center is a part of a company separated along spatial or accounting lines or according to areas of responsibility. You can allocate every fixed asset in the master record to exactly one cost center. At the level of the cost center, you can then

- post all depreciation and interest for the asset (see the topic System Configuration)
- plan all future depreciation and interest (for primary cost planning - see the topic Primary Cost Planning)
- automatically post statistics for profit or loss from the sale of assets (see the topic Additional Account Assigment).

Where assets are to be allocated to several cost centers at once, it is possible to distribute the costs via cost center accounting.

The cost center assignment of a fixed asset can be set to begin on a specific day. If this date changes in the course of time, the system distributes the depreciation and interest, specifically according to the appropriate period, to the different cost centers. In this case the costs are allocated to the cost center valid at the end of the depreciation period. The history of the cost center conversions can be managed in the system as long as you wish. A cost center can also be allocated to a business area as an asset can. In asset master record maintenance you ensure that the business area of the cost center matches the business area of the fixed asset.

Cost accounting can be organized both on company code level and on a cross-company code level. A cost center is always allocated to a controlling area. Therefore a fixed asset always belongs to a single controlling area, if a cost center is specified in the master record.

Chart of Accounts

In the Financial Accounting module, you can define different charts of accounts. Each company code is allocated to exactly one chart of accounts. The chart of accounts is used for the account assignments within Asset Accounting.

The account assignment is controlled by means of the asset class in Asset Accounting (see the topic Asset Classification). In each asset class, you must specify an account allocation key. In this account allocation key, you can specify the G/L accounts in which automatic posting takes place during different transactions.

Chart of Depreciation

The following basic functions exist for the valuation of assets in the R/3 AM System:

- You can define country-specific charts of depreciation. You define and manage all valuation terms and depreciation terms in the chart of depreciation.
- In each chart of depreciation, you can manage the valuation of assets in as many depreciation areas as you need. Depreciation areas that serve different purposes can be managed in parallel.
- The rules for the calculation of depreciation are set up in flexible keys. You can change and add to the standard calculation keys that are delievered with the system.
- There are specific functions that allow for the valuation of assets for special calculations (for example, for replacement values, insurable values, and investment support).

You are generally required to evaluate the asset portfolio according to different business management and legal requirements (for example, for the balance sheet, for cost accounting, and so on). Therefore, the R/3 AM System makes it possible to manage assets in parallel in as many so-called depreciation areas as you need. The chart of depreciation is a list of depreciation areas drawn up along business management lines. In this way, you can determine the features, and therefore the business significance, of the individual depreciation areas in each chart of depreciation.

Country-specific charts of depreciation

You must allocate every company code defined in Asset Accounting to exactly one chart of depreciation. In the interests of a common valuation of the fixed assets in the company, you should try and restrict the number of charts of depreciation used to as few as possible. Company codes from countries with the same valuation rules or company codes of a certain industry sector generally use the same chart of depreciation.

Reference charts of depreciation

SAP therefore delivers typical reference charts of depreciation for each country, displaying all the possible combinations of the different depreciation areas. You cannot use these charts of depreciation directly. You must open your own "active" chart of depreciation. In this case, you can take over areas you want to use from the reference chart of depreciation into your own chart of depreciation. You can ignore any depreciation areas that are not needed.

You can document the meaning of any chart of depreciation you set up in the system. You can write a long text to describe any newly created chart of depreciation.

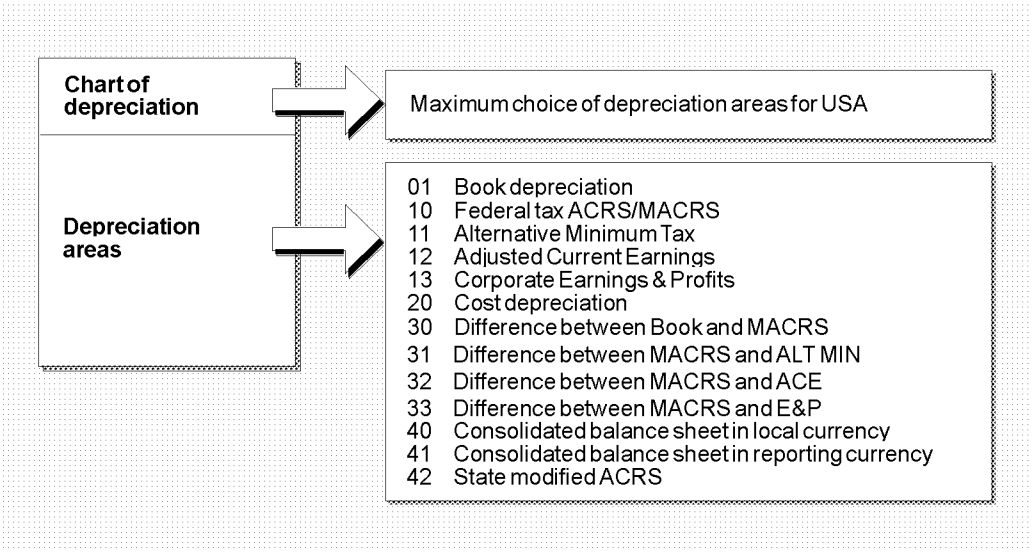


Chart of depreciation
Maximum choice of depreciation areas for USA
Depreciation areas
01 Book depreciation
10 Federal tax ACRS/MACRS
11 Alternative Minimum Tax
12 Adjusted Current Earnings
13 Corporate Earnings & Profits
20 Cost depreciation
30 Difference between Book and MACRS
31 Difference between MACRS and ALT MIN
32 Difference between MACRS and ACE
33 Difference between MACRS and E&P
40 Consolidated balance sheet in local currency
41 Consolidated balance sheet in reporting currency
42 State modified ACRS

Fig. Example chart of depreciation U.S.A.

Dependent objects

The following objects are dependent on the chart of depreciation:

- depreciation areas
- depreciation keys
- investment support measures
- certain features of the transaction types

The allocation of a company code to a chart of depreciation and the allocation of a company code to a chart of accounts are independent of one another. This means that several company codes can use the same chart of accounts although they are allocated to different charts of depreciation (and vice versa).

The following organizational structures (chart of accounts/chart of depreciation) are possible:

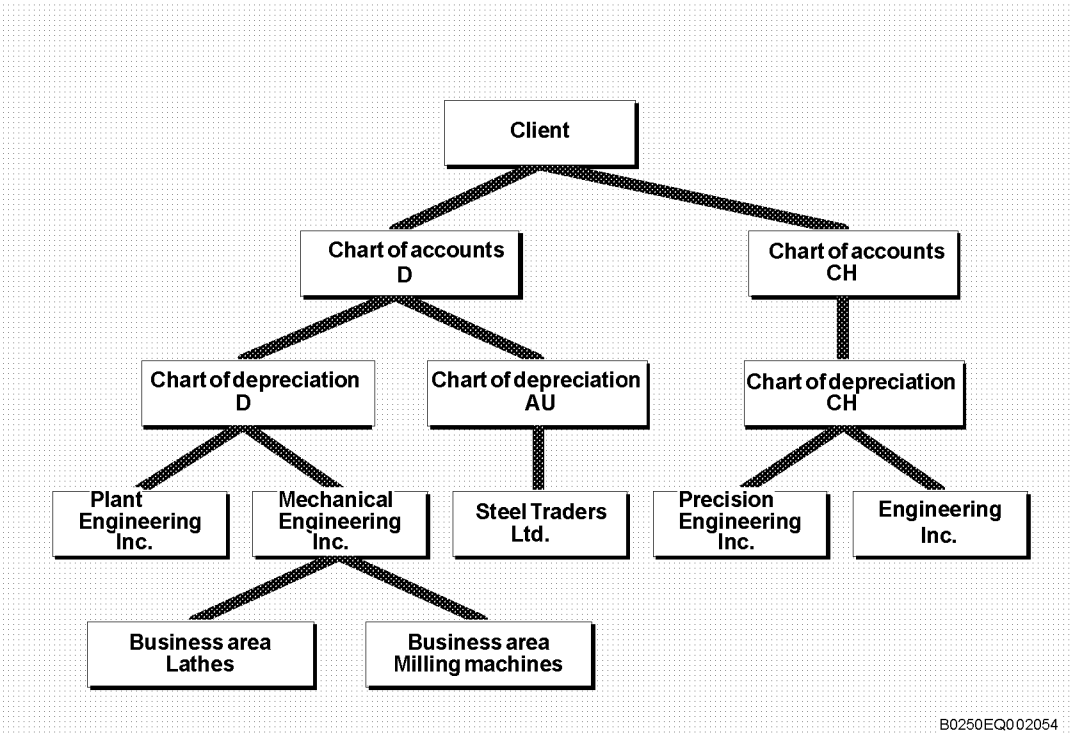


Fig. Organizational structure 1

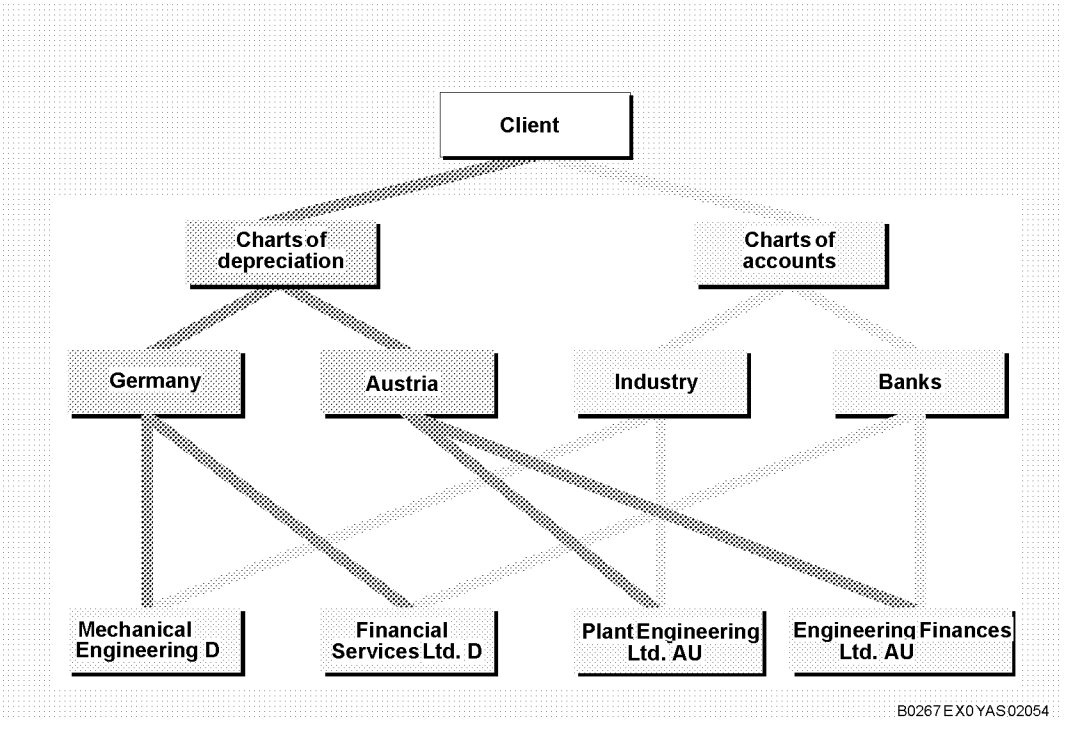


Fig. Organizational structure 2

Depreciation Area

Each fixed asset is evaluated for a specific purpose, for example, for balance sheet, cost-accounting or net worth tax purposes. You can manage the valuation parameters and values necessary for this in a depreciation area. Since the system in effect allows you to define any number of depreciation areas, you can manage as many different valuations as desired. Depreciation areas can be grouped together, according to requirements of a specific country or economic area, into a chart of depreciation.

The depreciation areas are accessible through two-digit numeric keys. In the asset class or directly in the asset master record, you can specify the asset-specific depreciation terms for every depreciation area belonging to the chart of depreciation. (see Topic Master Data Maintenance)

Account Determination

You can post both the asset values and the depreciation values from the individual areas to separate accounts in Financial Accounting. The accounts can be individually specified in the account allocation key for each depreciation area. You define the account allocation key in Asset Customizing and specify the key in the particular asset class.
The system then immediately posts the asset transactions online to the General Ledger accounts that have been specified. (Currently, you can only post acquisitions online for the master area. In the other areas, the posting is periodic. For defining the "master area," see Topic Characteristics of a Depreciation Area).) The depreciation postings are carried out periodically. More information about account determination can be found in the topic Account Determination .

Delete Depreciation Areas

You can also delete depreciation areas. The area you want to delete must meet the following requirements:

- It cannot be the master depreciation area (01).
- There can be no asset values in the depreciation area (there cannot be any acquisition postings in the area). A reorganization program is being planned for Release 3.0. Using this program you will be able to delete all asset transactions in a depreciation area.
- The area cannot be a reference area for another area (for acquisition values, depreciation terms). In this case, you should change the definitions of the areas that are dependent on the depreciation area you want to delete (see the topic Characteristics of a Depreciation Area).
- The area cannot be in the calculation rule for a derived depreciation area. In this case, you need to change the calculation rule for the derived depreciation area (see the topic Derived Depreciation Area).
- The definition of the area cannot provide for automatic posting of asset values to the General Ledger. In this case, remove the automatic posting indicator in the definition of the area (see the topic Characteristics of a Depreciation Area).

Derived Depreciation Area

The values of a depreciation area do not necessarily have to be stored permanently in the system but can be calculated on a current basis from the values of areas actually stored in the system. Therefore, a distinction is made between the real and derived depreciation areas within the system. You must designate a derived area as such in its Customizing definition. You can define derived areas yourself according to your particular requirements. They can be used for your specific informational needs. Derived areas function the same as real areas in regard to reports and value field display. In particular, you can also post the depreciation values of the derived areas in Financial Accounting. For all depreciation areas and, therefore, for the derived ones too, it is possible to allocate a special text to every value field of the transaction "Display asset values" (in the Customizing definition of the area under *Goto -> Value field text*).

Layout rule

You specify the layout rule of a derived depreciation area in its Customizing definition (under *Goto -> Derived area*). In the layout rule of a derived area, you can use up to four actual areas. Allowed arithmetic operations are addition and subtraction. It is possible to mix the calculation rules. This includes using proportionate values in the calculation.

When defining the layout rule, you must provide a reasonable layout. Make sure that the key of the derived area is larger than the key of the real area it is based on. Thus a derived area "03" can result from the real areas "01" and "02" but not from areas "04" and "05."

Caution
When defining a derived area, you must keep in mind that the rules for remaining book value in the derived area can affect the depreciation in the real areas from which it is derived (see the topic Characteristics of a Depreciation Area).

Example

Special reserves (in Germany) (the difference between book depreciation and tax depreciation)
The depreciation area "book depreciation" is subtracted from the area "tax depreciation for balance sheet purposes"

Area	-	01	+	02	=	03
Name		Book depreciation		Tax depreciation		Special res.
Derived area		-		-		X
APC		X	⇒	X		-
Ordinary dep.		X		X		X
Special dep.		-		X		X
Automatic entry		X		-		X
Book value		≥ 0		≥ 0		≤ 0

Fig. Depreciation area for special reserves in Germany

Mean value area

The mean value area constitutes a special form of a derived area. It is an area whose book value results as a mean value from the values of two areas (for example, from one with a declining balance method of depreciation and one with straight-line depreciation). In order to be able to carry out further calculations after determining the mean value (for example, calculating with scrap or cut-off values), the system stores the area with the exact mean values permanently.

Examples

Possible examples of derived areas are:

- Difference between Book and Primary Federal
- Difference between Primary Federal and Alternative Minimum
- Mean value from various depreciation types

For example, the system establishes the mean value from the declining balance method of depreciation in one area and the straight-line depreciation in another area.

Characteristics of a Depreciation Area

The depreciation areas have no automatically defined features. You determine the features of each area individually, based on the basic structure, which is the same for all depreciation areas. You can specify different features both at chart of depreciation level and at company code level.

Master area

The so-called master area (Area 01) has a special position. This is generally the area for the balance sheet valuation. This master area is subject to the following restrictions:

- The values of this area are always automatically posted in Financial Accounting.
- During takeover of old assets data, you must always complete value entry in this area first.
- You cannot take over values or parameters from other areas.
- The currency of the area must always match the currency of the respective company code.
- You cannot delete the master area.

Chart of depreciation-related features

By allocating a depreciation area to a chart of depreciation, an area can have different features in different charts of depreciation. You can document these features and their importance in the system by creating a long text for each area.

You can make the following specifications per depreciation area:

- **Special functions**

- indicator for derived depreciation areas
  - the area handles investment support only
  - the net book value is determined as an average
  - positive/negative net book value
    Allow negative net book values in all areas,
    - where assets are depreciated below zero
    - which handle investment support on the liabilities side
- which are derived and can have negative values due to their value calculation rule.

Caution
Although you do not allow negative net book values in a derived depreciation area, negative values may occur due to the calculation formula. In this case the depreciation is reduced in the real areas (on which the derived areas are based) until the net book value in the derived area is at least zero. For this reason it is recommended that you allow for both positive and negative net book value in derived areas.

- **Managing certain values**

- acquisition and production costs (APC)
  - ordinary depreciation
  - special tax depreciation
  - unplanned depreciation
- transfer of surplus reserves
  - interest
  - investment support

o **Revaluation**

- Revaluation of APC (replacement values)
  - Revaluation of accumulated depreciation (backlog invoice)

o **Posting asset values in Financial Accounting**
Depending on your specifications, the values of an area are automatically posted immediately online in Financial Accounting (at present, only possible for one area per chart of depreciation; Exception: asset retirement / investment support area managed on the liabilities side)

- are posted periodically to Financial Accounting
- are not posted to Financial Accounting.

o **Authorization for asset views**
For every depreciation area, you can determine whether the values from a certain asset view are only for display or may also be maintained.

o **Takeover options for values and depreciation rules from other areas** (not for derived areas or the master area)
You can allow for depreciation areas to take over posting values, as well as depreciation terms, from another depreciation area. There is also an option, which enables you to specify that the takeover is mandatory, and that no changes are allowed. In this way, you can ensure that two areas are always supplied with the same values when posting, or that two areas are uniformly depreciated.

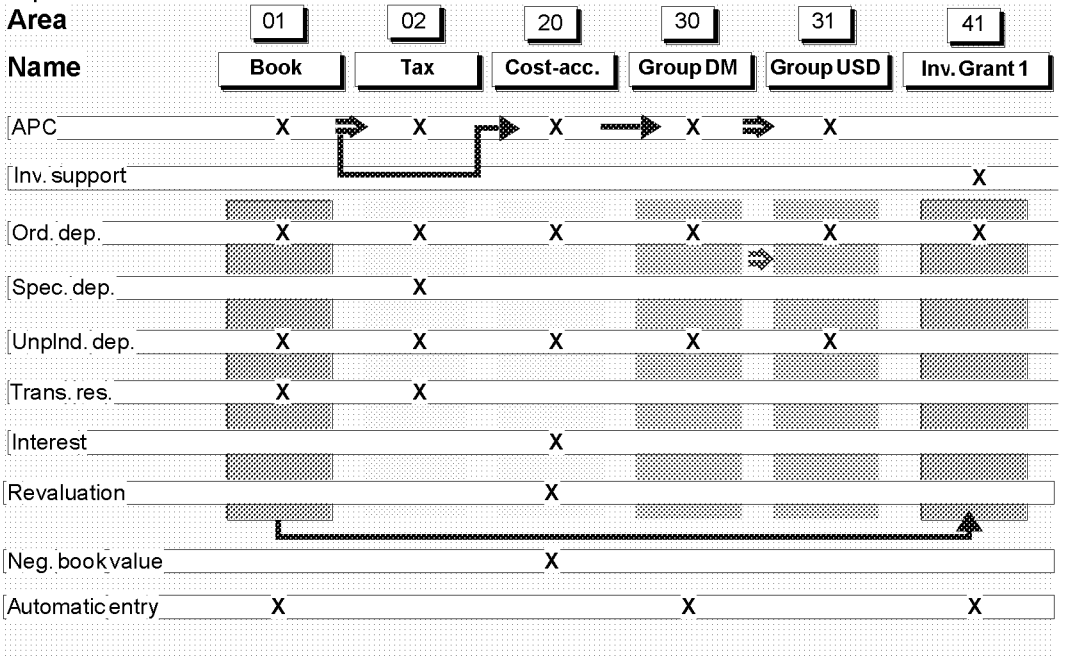


Fig. Takeover between depreciation areas

o **Transfer between affiliated companies**
You can specify depreciation areas for valuation in regard to group consolidation (see the topic Transfer Posting Between Two Affiliated Companies). This has the following result:

- The system represents retirements to and acquisitions from an affiliated company as transfers in the respective group concern asset history sheet.

- These transfers are posted gross (that is, with the historical acquisition and depreciation values).

Company code related features

In addition to these set features, company code related features also exist.

- **Amount specifications**
  The following are classed as amount specifications: memo value, the maximum amount for low value assets, the changeover value for declining balance depreciation, and rules for rounding off of APC and remaining book value.

- **Specifications for the valuation of net assets**
  You can determine at the company code level whether an area is to be included in the valuation of net assets.
- **Distribution of depreciation over the fiscal year**
  In general, depreciation is distributed evenly over the individual periods in the fiscal year. That is, the depreciation amount is the same in every period. However, there is a special control in Customizing that allows for different amounts to be distributed to the individual periods. This control is dependent on the company code and the depreciation area.

- **Foreign currencies**
  Except for the so-called master area, every area can theoretically be managed in a separate currency. In this case, all transactions of an incoming nature are converted into the foreign currency at the exchange rate valid on the posting date. The system calculates depreciation and proportional value adjustments at asset retirement or transfer directly in the foreign currency.

  Generally you need only one depreciation area in a foreign currency for group concern valuation purposes, if the company code involved belongs to a a foreign group. In this case, you should also manage a depreciation area in the local currency that is otherwise identical to the area managed in the foreign currency. You should define the foreign currency area so that it automatically takes over the posting values and valuation parameters from the local currency area, making sure that these values cannot be changed. This is the only way to precisely distinguish between differences resulting from currency conversion and differences due to different valuation rules.

Standard Depreciation Areas U.S.A.

For each country, SAP supplies a chart of depreciation which contains the most commonly used depreciation areas. You can include these areas in your active chart of depreciation and increase your chart of depreciation with further customer-specific depreciation areas.Standard depreciation areas USA.

The following depreciation areas are supplied in the standard chart of depreciation for the USA.

Book

This is the leading area for financial reporting. All documents should be posted to this area.

Federal Tax

- **Primary Federal Tax Book**
  This area is used to calculate normal federal tax depreciation using either ACRS or MACRS.
- **Alternative Minimum Tax**
  This area is used to calculate the depreciation amount to be used to determine the tax preference items in accordance with the Alternative Minimum Tax regulation.
- **Adjusted Current Earnings**
  This area is used to determine the tax adjustments in accordance with the Adjusted Current Earnings regulation.
- **Corporate Earnings and Profits**

Derived Areas

- **Difference between Book and Primary Federal**
  This difference has to be reported together with the tax return.
- **Difference between Primary Federal and Alternative Minimum**
  This difference has to be reported together with the tax return.
- **Difference between Primary Federal and Adjusted Current Earnings**
  This area shows the whole difference. It does not include the 75% calculation. This calculation is performed via report RAUSTX31.
- **Difference between Primary Federal and Corporate Earnings and Profits**

Miscellaneous Areas

- **Cost-accounting depreciation**
  This area manages asset values for cost-accounting purposes. The supplied standard depreciation area depreciates the replacement values without simultaneously increasing the cumulative past depreciation. The result is a net book value below zero and a calculation of cost-accounting interest.
- **Consolidated Balance Sheet in the Local Currency**
  If a company is part of a group, which has its own guidelines for the valuation of its fixed assets, or if cross transfers are carried out between affiliated companies, a separate valuation area will be required for reporting purposes. Both acquisition values and depreciation guidelines can differ from the balance sheet depreciation area.
- **Consolidated Balance Sheet in the Group Currency**
  This area will be needed if a company belongs to a group, which evaluates in a different currency. This area uses the group currency. The differences resulting from varying valuation methods and the difference resulting from exchange rates must be managed separately. Parallel to this area, you will also need to maintain the area "Consolidated Balance Sheet in Local Currency". The depreciation terms and posting values for both areas must necessarily be

identical.

- **State Tax (SMARCS)**
  This area is used to calculate depreciation for those states that do not accept Federal or Book Depreciation.

Standard Depreciation Areas Germany

SAP delivers country-specific charts of depreciation, which contain a maximum complement of different depreciation areas. You can transfer these areas into your active chart of depreciation and you can extend your chart of depreciation by adding further customer-specific depreciation areas.

Standard depreciation areas for Germany

The following depreciation areas are delivered in the standard chart of depreciation for Germany (ODE):

- **Book depreciation(01)**
  This area is the master area, in which all business transactions are generally posted. If special tax depreciation is to be managed as special reserves, you may use the book depreciation area only for depreciation allowed by trade law (i.e., without special depreciation).

- **Special tax depreciation for acquisition and production costs in the individual balance sheet (02)**
  Special tax depreciation is managed in this area. This area is required so that the special depreciation area 03 (which is a derived area) can calculate special reserves according to Paragraph 281(1) HGB (Handelsgesetzbuch = German Commercial Code [GCC]) or the amount differential according to Paragraph 285(5) HGB (GCC). So that this difference can be exactly determined in the derived area, the acquisition and production costs must be identical to those in the book depreciation area. In addition, this area is so defined that it takes over the values posted directly from area 01 (book depreciation). If alternative APC is also to be managed for a balance sheet for tax purposes, then depreciation area 15 should be used for it.
  CAUTION
  *If you choose to represent the special tax depreciation as special reserves on the liabilities side of the balance sheet, you may **not** post depreciation from this depreciation area to Financial Accounting in addition to book depreciation. You have to use Area 03 for the allocation and/or amortization of special reserves.*

- **Special reserves due to special tax depreciation**
  Special reserves can result, for example, from one of the following circumstances:
  - special tax depreciation (e.g., transfer of surplus reserves)
  - differing depreciation methods (book depreciation/tax depreciation)
  - differing useful life (book depreciation/tax depreciation)

  Depreciation area 03 is used for the display of the special reserves according to Paragraph 281(1) HGB (GCC) or the amount differential according to Paragraph 285(5) HGB (GCC). This area is derived from depreciation area 01 and depreciation area 02. No values are stored in this area. They are always specified as the difference between the depreciation areas for special tax depreciation (02) and for book depreciation (01). Thus it is a derived depreciation area. The allocation and/or amortization of special reserves can be posted periodically from this area to the appropriate liability accounts in Financial Accounting via the depreciation posting program.

  This area is set up in such a way that the book value must always be negative or zero. This means that the net book value in the area for special tax depreciation must always be less than or equal to the net book value in the book depreciation area. Therefore, no depreciation parameters that lead to a lower depreciation than in the book depreciation area should be entered in the area for special tax depreciation. If, however, this were the case, the depreciation calculation program automatically reduces the depreciation in the book depreciation area as far as is necessary and possible.

- **Valuation of net assets (10)**

In this depreciation area, you determine valuation rules for the net worth tax. The area must then exist if no other area covers the property valuation rules.

- **Balance sheet for tax purposes (15)**
  This area is used for the management of values for an alternative balance sheet for tax purposes. It can be managed independently from the trade balance sheet. It is not necessary to manage the balance sheet for tax purposes separately if the only variance from the trade balance sheet is the inclusion of special tax depreciation, since the balance sheet for tax purposes can be determined through the area "special tax depreciation on APCs in the individual balance sheet" (02).

- **Cost-accounting depreciation**
  The asset values for cost accounting purposes are managed in this area. The delivered area depreciates the replacement values and simultaneously appreciates cumulative past depreciation. Depreciation is carried out below the net book value zero and cost-accounting interest is calculated.

- **Consolidated balance sheet in local currency**
  If a company is part of a group with separate directives for the valuation of fixed assets, or if gross transfer is to be carried between affiliated companies, a separate area is needed for consolidated valuation purposes. Both APC and depreciation parameters can in this case deviate from the balance sheet depreciation area.

- **Consolidated balance sheet in reporting currency (31)/>**
  This area is needed if a company belongs to a group that reports in another currency. It is managed in the group currency. To clearly separate differences resulting from different valuation methods from differences due to currency conversion, the area "consolidated balance sheet in local currency" is also necessary in addition to this area. The depreciation terms and posting values of the two group areas must be identical for this purpose.

- **Area for investment support managed on the assets side (41)**
  This area represents investment support measures managed on the assets side. Investment support of this kind is posted to the book depreciation area where it reduces the acquisition and production costs. If you are managing only one investment support of this type for your assets, you do not need a separate depreciation area, since the corresponding posting can be handled in the book depreciation area. If you wish to manage more than one investment support for a particular asset, then each subsequent investment support measure must be handled in a separate active area and be posted from there to Financial Accounting.

- **Area for investment support shown on the liabilities side (51)**
  This area represents investment support dealt with on the liabilities side. The measures are posted as an adjustment item for the acquisition and production costs on the liabilities side. The acquisition and production costs are not reduced in the book depreciation area. No posting is made in the book depreciation area. The investment support handled on the liabilities side can be cleared through depreciation, similar to the reduction of APC through depreciation in the book depreciation area. You must post the depreciation and transactions from this area periodically to Financial Accounting.

Possible Configurations for Special Valuations

Naturally, it is not possible to describe all the uses of the depreciation areas in the SAP standard chart of depreciation here. Therefore, only a few simple suggestions for configuration are discussed below. Further explanations relate to examples from the standard chart of depreciation for Germany.

Special depreciation shown on the liabilities side

In many countries, you are allowed to use the same valuation rate for tax depreciation and for the trade balance sheet. However, the person reading the balance sheet should still be able to recognize that a different business management approach was used. For this purpose, book depreciation is shown on the assets side of the balance sheet, and the depreciation allowed by tax law, which exceeds the book depreciation, is shown as special reserves on the liabilities side of the balance sheet.

To carry out this procedure, you need depreciation areas 01, 02, 03, and in certain circumstances 15. Areas 01 and 02 depreciate from the identical acquisition and production costs. Area 01 uses book depreciation, while area 02 uses the depreciation allowed by tax law. The use of these two different types of depreciation leads to a difference. This difference is shown in depreciation area 03. You post depreciation from area 01, using the depreciation posting program, to the corresponding expense accounts in Financial Accounting. You use the depreciation posting program in the same way to post and/or clear the special depreciation to the corresponding liablity accounts.

In addition, you also have to make sure that changes to the value of special reserves for tax depreciation, due to proportional value adjustments resulting from retirements, transfers, and so on, are also automatically posted to Financial Accounting (see the chapter "Other periodic processing").

Caution
Depreciation from area 02 cannot be posted to Financial Accounting in addition to depreciation from area 01.

If you also want to manage acquisition and production costs for the tax balance sheet that are different from the book depreciation area, then you need to use depreciation area 15. You should also use the depreciation rate there that is allowed by tax legislation. Due to its using a different APC, this area cannot have identical values to depreciation areas 01 and 02.

Example:

An asset is acquired at the beginning of year 1, with acquisition and production costs of 10000. The useful life is 5 years. The depreciation terms in the individual depreciation areas are as follows:

Area 01: Straight-line depreciation over total useful life

Area 02: Special tax depreciation 60,10,10,10,10% from APC

Area 03: Special reserves (Difference: tax deprec. - book deprec.)

In the first year, the system posts 2000 ordinary depreciation from area 01, and 4000 special tax depreciation (allocation of the special reserves) from area 03 to the corresponding accounts in the General Ledger. In each of the following years, 2000 ordinary depreciation is again posted. Due to the reduced depreciation in area 02, the special reserve will gradually be amortized.

The following table shows the evolution of the remaining book value in the individual areas over the total useful life (always at the end of the fiscal year), as well as the allocation or amortization of the special reserves posted in the individual years.

	Area 01	Area 02	Area 03
APC	10000	10000	0
Dep. year 1	-2000	-6000	-4000 (Alloc.)
RBV	8000	4000	-4000
Dep. year 2	-2000	-1000	1000 (Amor.)
RBV	6000	3000	-3000
Dep. year 3	-2000	-1000	1000 (Amor.)
RBV	4000	2000	-2000
Dep. year 4	-2000	-1000	1000 (Amor.)
RBV	2000	1000	-1000
Dep. year 5	-2000	-1000	1000 (Amor.)
RBV	0	0	0

Showing investment support on the assets/liabilities side of the balance sheet

Representing investment support measures in the balance sheet is analagous to the representation of special reserves for tax depreciation. In order to show investment support on the liablities side, you need depreciation area 51. You need to specify the liability accounts to be posted for each support measure.

If you treat the support measure as a reduction of the APC on the assets side of the balance sheet, you do not necessarily need a separate depreciation area. In principle, you can deduct the investment support measure from the acquisition and production costs in any depreciation area. However, if you manage more than one investment support measure for a given asset, and you want to display the values separately, then use a separate depreciation area for each additional support measure. Depreciation area 41 is defined explicitly for the management of support measures handled as reduction of APC.

No separation of book depreciation and tax depreciation

Proceed as follows, if you do not want to manage the difference between book depreciation and permitted tax depreciation as a special reserve:

First, you must set up area 01 according to the specifications for the tax depreciation area 02. Then, you can delete areas 02 and 03 from your chart of depreciation. Area 01 is then the only area that posts to the balance sheet accounts, value adjustment and expense accounts in Financial Accounting.

Valuation for net worth tax

As long as the valuation for net worth tax is based on the usual valuation for tax purposes (as is the case in Germany since 1993), you do not need a separate depreciation area for net worth tax. You can use either area 02 or area 15 for this purpose.

Transfer of reserves

You can represent the transfer of reserves to assets in three different ways:

in area 01 as reduction on the assets side of the balance sheet

in area 03 as special reserves (not separate from other special reserves based on tax legislation)

displayed separately in an individually defined derived depreciation area

These different versions are described in detail in the topic Transfer of Reserves .

Currencies

The R/3 FI System (Financial Accounting) enables you to manage all values in one company code in up to three parallel currencies. In order to do this, you can define three local currencies for each company code in FI Customizing. You make the following specifications for each local currency:

- currency type, according to the function of the currency (for example, group currency)
- exchange rate type for the currency translation
- the source currency for the currency translation
- the date (for example, the document date) for the currency translation

It is also possible to update values that are posted in Asset Management in parallel currencies. The asset values can be updated in Financial Accounting in the same FI document as the document in local currency. In order to do this, you need to set up separate depreciation areas for each currency. You must set up the depreciation areas with the following features:

- The currency type and the currency in the depreciation areas have to be identical to the corresponding parallel currencies in the respective company code.
- The depreciation areas must manage the same depreciation terms and the same acquisition values as the book depreciation area.
- The posting rules must allow for parallel posting of asset values and depreciation values.

The system then automatically supplies the corresponding posting documents with the additional values from these depreciation areas.

Authorization

Authorizations are there to protect the system against unauthorized access. The data and values of asset classes and asset master records within an organizational unit should be protected. The authorization check is carried out at the earliest possible point when all necessary specifications are available.

The following authorization objects are defined in Asset Management:

Authorization objects

Functions	Authorization object
Assets in general	Asset view
Asset posting	Company code/asset class
Asset posting	Asset class/transaction type
Asset class maintenance	Asset classes
Asset accounting	Authorization for periodic processing
Asset master record maint.	Company code/asset class
Asset master record maint.	Company code/business area
Asset master record maint.	Company code/plant
Customizing	Control data (Tables)

Authorization objects are represented in the system by particular fields (for example, company code). You define an authorization by specifying the allowed entries for the particular fields in the authorization object (* = all). You allocate the authorizations to users by means of so called authorization profiles.

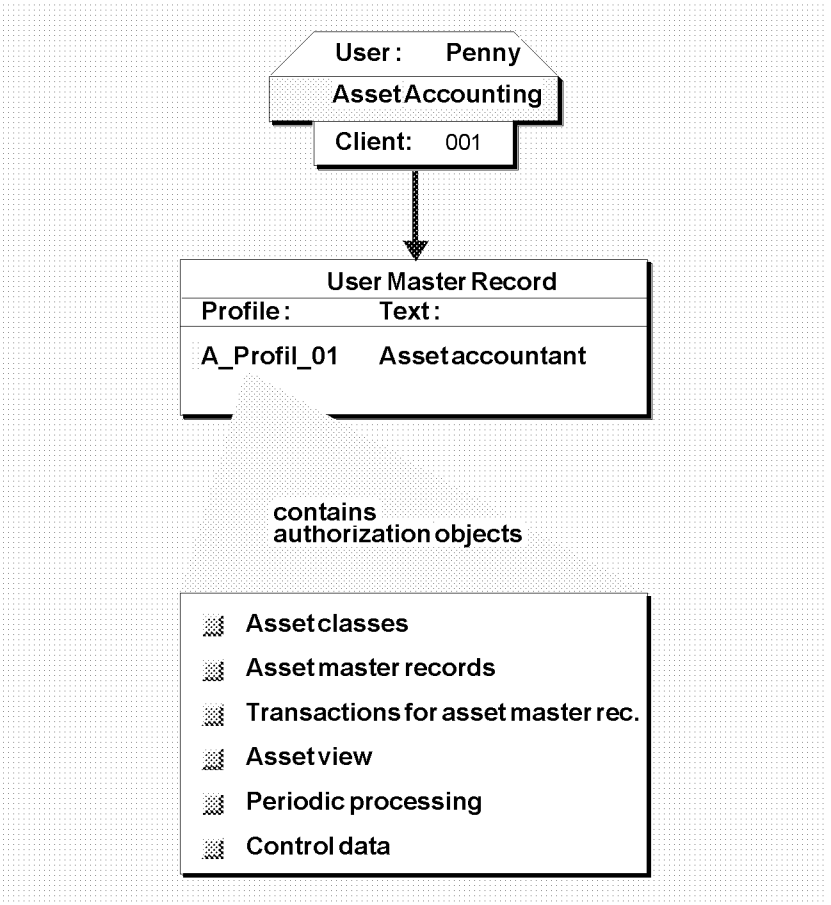
SAP delivers the following standard profiles for Asset Management:

Asset Accounting full authorization

- Asset Accounting full authorization (display only)
- Sample profile for the Asset Accounting System Administrator
- Sample profile for the Asset Accountant
- Sample profile for the Asset Accounting clerk
- Sample profile for the buyer for Asset Accounting
- Sample profile for a technician for Asset Accounting
- Sample profile for a warehouse clerk for Asset Accounting

A detailed description of these profiles can be found in the online documentation. There is also a standard profile in Financial Accounting that authorizes posting to the General Ledger asset accounts (account type A).

The following figure shows the relationships between the user master record, the authorization profile and the authorization objects:



Dia. Authorization object, authorization profile, user master record

Authorization check

The authorization checks are carried out for the following activities:

- maintenance and display of the asset classes
- maintenance and display of the asset master records
- maintenance and display of the values of a fixed asset
- posting to a fixed asset
- carrying out periodic processing
- creating a list using the logical data bank ADA
- maintenance and display of control data

For asset class maintenance, you can assign the authorization for different activities to the user for each individual asset class. For master record maintenance, you can also assign the authorization for certain organizational units (company code, plant, business area). You can protect asset transactions at company code and asset class level depending on the type of transaction.

Control data

Control data are divided into two authorization classes:

- customer data (for example organizational structure)

- program control data

You can specify these authorization classes in detail according to the requirements of the company. To do this the table TDDAT is used. Here you can determine the authorization class for each customizing function. This table is, of course, already delivered with values. For this authorization object, only the activities "Change" and "Display" are allowed.

Asset views

The authorization object "asset view" has a special function. The asset view applies especially to employees, who have only occasional limited contact with fixed assets. The asset view allows such employees only a limited view of asset data and values, even if they formally have access to every master record. With the asset view 'insurance', for example, a person responsible for insurance can be granted access only to the data that is relevant for insurance.

The asset view determines which fields and depreciation areas can be processed from that particular view. Seven predefined asset views are delivered, which you can adapt according to your own ideas. You can reduce the number of the views but you cannot at present increase the number to more than seven views.

The seven views are:

0 Old assets data
1 Asset Accounting
2 Costing
3 Tax
4 Purchasing
5 Method
6 Insurance

In Customizing for the asset views, you can assign an individual processing authorization per asset view to every field group of the asset master file (maintenance authorization, display authorization or no authorization). When defining a depreciation area, you can determine for each area whether the asset view allows you access to the value fields of that area.

Allocation to user master records

The asset view is an authorization object in Asset Accounting. You can define the authorization for asset views as you would for other objects. You then allocate this authorization to the user master master records. As with other parameters (for example, company code), an asset view can be stored as a default setting in the user master.

The following figure shows the structure of an asset view, and the specifications made for it in the definition of the depreciation area:

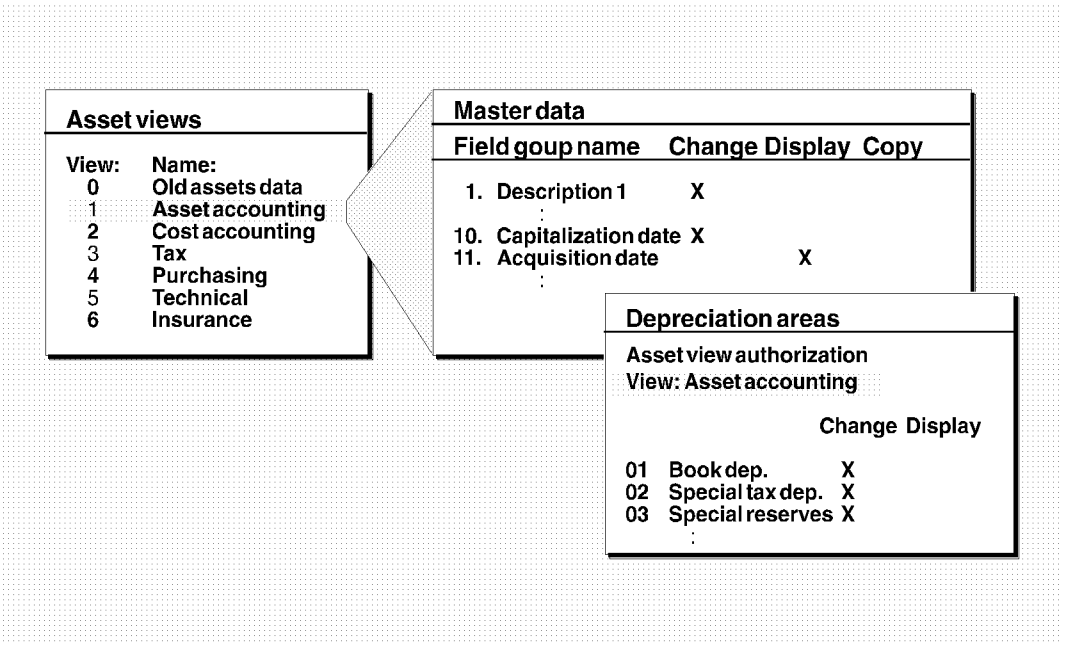


Fig. Authorizations for an asset view

Structuring the Assets

The following describes the system functions for structuring your assets according to your individual requirements.

Structuring Levels

Asset Classification

Asset Types

Representing Assets in the System

Master Data Maintenance

Number Allocation

Screen Selection and Maintenance Level

Views Concept

Classification Criteria

Time - depency

Match Code

Deactivate - Delete - Block

Structuring Levels

It is possible to structure fixed assets in the system at several different levels:

- o balance sheet level
- o classification level
- o asset-related level

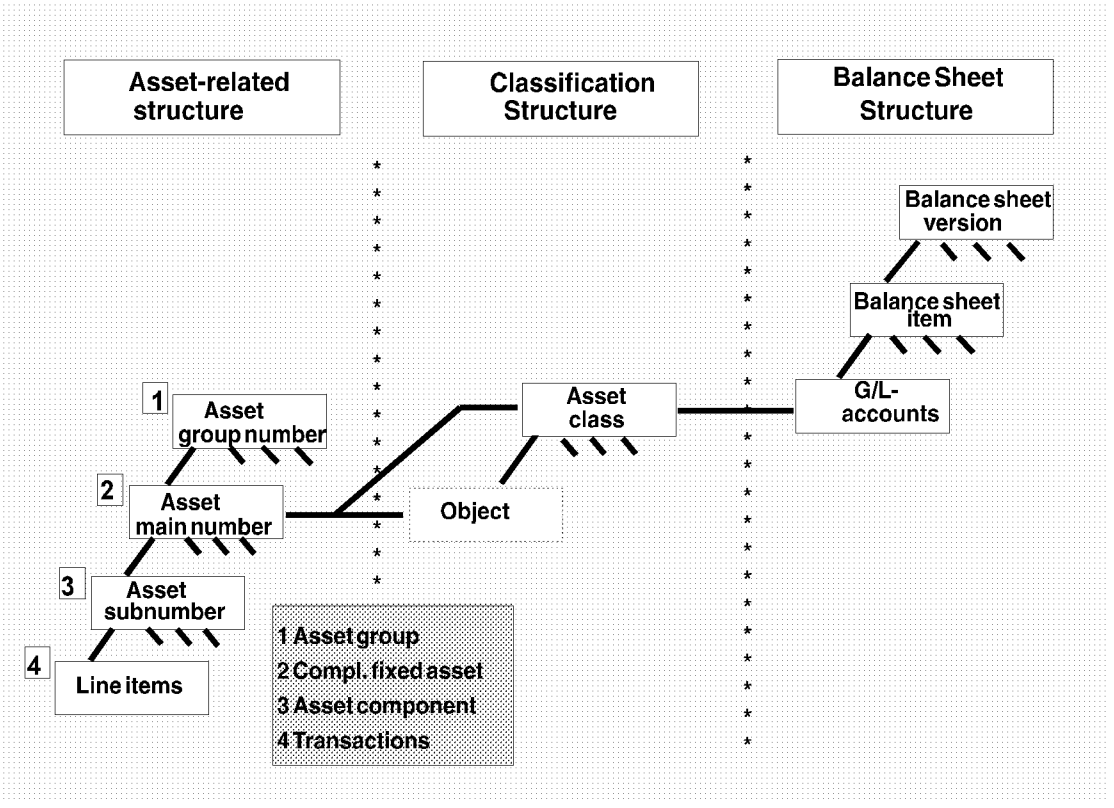


Fig.: Structuring of fixed assets

Balance sheet level

For structuring according to balance sheet criteria, the R/3 Financial Accounting (FI) System offers a three-level hierarchy:

- o balance sheet version
- o balance sheet position
- o general Ledger

Classification level

At this level the AM System enables you to structure assets according to asset classes. You can use asset classes to structure assets according to legal requirements or the demands of business administration (asset types). Every asset belongs to an asset class. You use the account allocation of the asset class to the General Ledger to assign each asset to an individual position in the balance sheet.

In the near future, it will also be possible to structure the assets according to technical requirements

in an "object catalog." This structure will be a level deeper than the asset class.

Asset-related level

At the asset-related level, a four-level hierarchy has been set up:

- The asset group number makes it possible to group together a number of assets according to any criteria you may choose (for example, all the assets that make up a production line).
- The asset main number represents an asset that is to be evaluated independently.
- Below the asset main number, the asset can be further divided into its component parts by the use of asset sub-numbers.
- For each asset and each depreciation area, the system manages all transactions affecting assets as line items.

The following topics provide a comprehensive explanation of this structuring terminology, as well as of the various ways in which the structuring can be realized.

Asset Classification

Via asset classes, the system establishes links between the General Ledger accounts in Financial Accounting and the asset master records. The following diagram shows the position of the asset classes in the bookkeeping system:

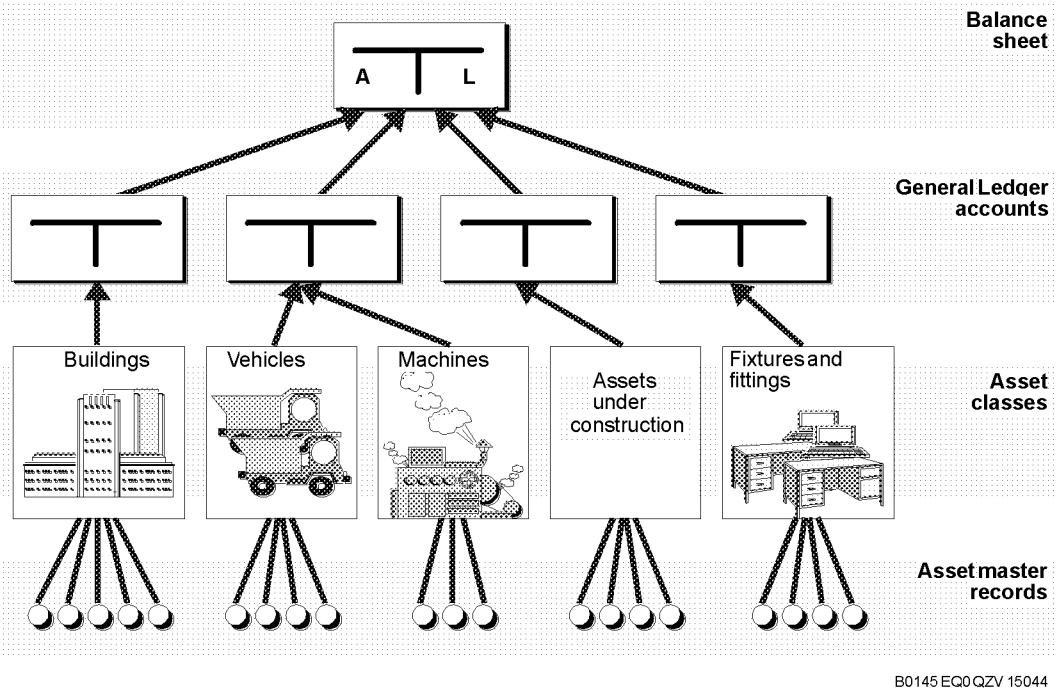


Fig. Asset Classes

The asset classes are represented in the system by master records that are structured very much like asset master records (with the addition of control parameters). Using the asset classes, you can structure your assets according to the needs of your company. Keep the following criteria in mind when creating asset classes:

- The asset class is a selection criterion for all standard asset reports. You can also sort and request totals according to specific features of the asset class.
- You can control the layout of screens and fields on the basis of the asset class.
- The asset class also serves another important function. The asset class provides default values to the master records that belong to the class. This feature simplifies the creation of new asset master records and ensures more consistent data. In this sense, the asset class serves as a sort of sample master record.
- You can control the assignment of asset numbers via the asset class.

The structuring of assets from a bookkeeping perspective is not influenced by the technically oriented structuring in the PM (Plant Maintenance) system. The PM system has its own structural organization (functional location, equipment). This structure enables you to organize assets according to maintenance requirements. You can create a link between the PM and the AM systems by entering the AM asset number in the equipment master record. In this way, it is also possible to select all the assets that belong to a piece of equipment.

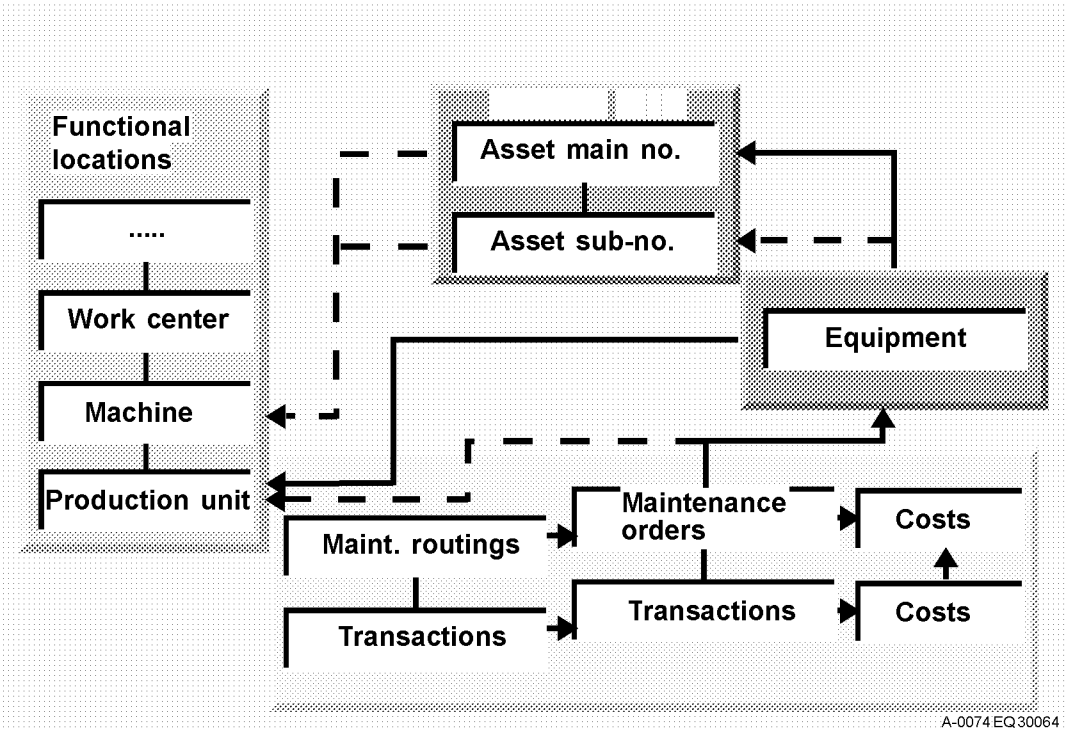


Fig. Technical Objects

The solid line shows the relationships between assets and technical objects when using equipment and functional locations at the same time. A piece of equipment can be allocated to the asset main number as well as to the asset sub-number. The broken line shows the scenario when only functional locations are used.

Asset class catalog

The asset class is defined across company codes. The catalog of asset classes is equally relevant for all company codes. This is also valid if the company codes are allocated to different charts of depreciation, and therefore have different depreciation areas.

The structure of the master record for the asset class corresponds essentially to the structure of the normal asset master record. There is a portion for general administrative master data, and a portion for the chart of depreciation and its parameters.

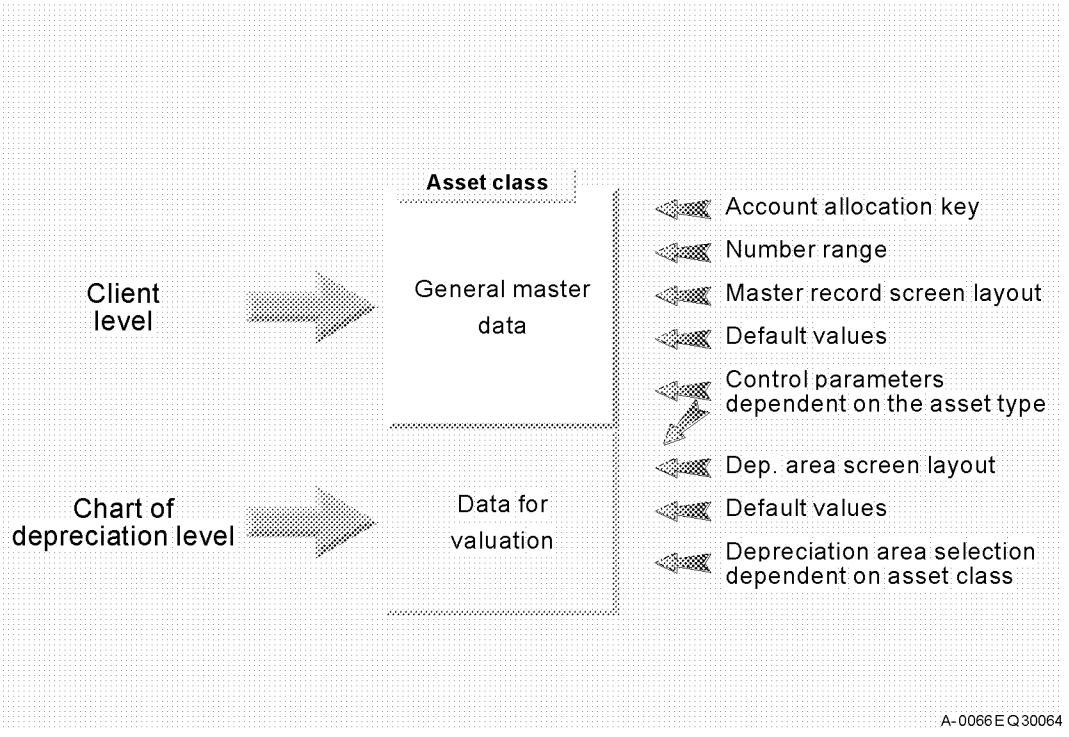


Fig. Structure of asset class

When setting up asset classes, you can allocate several charts of depreciation, along with their depreciation areas, to each asset class. In order to create an asset in a given asset class, you have to be sure that the chart of depreciation for the corresponding company code has been allocated to that asset class.

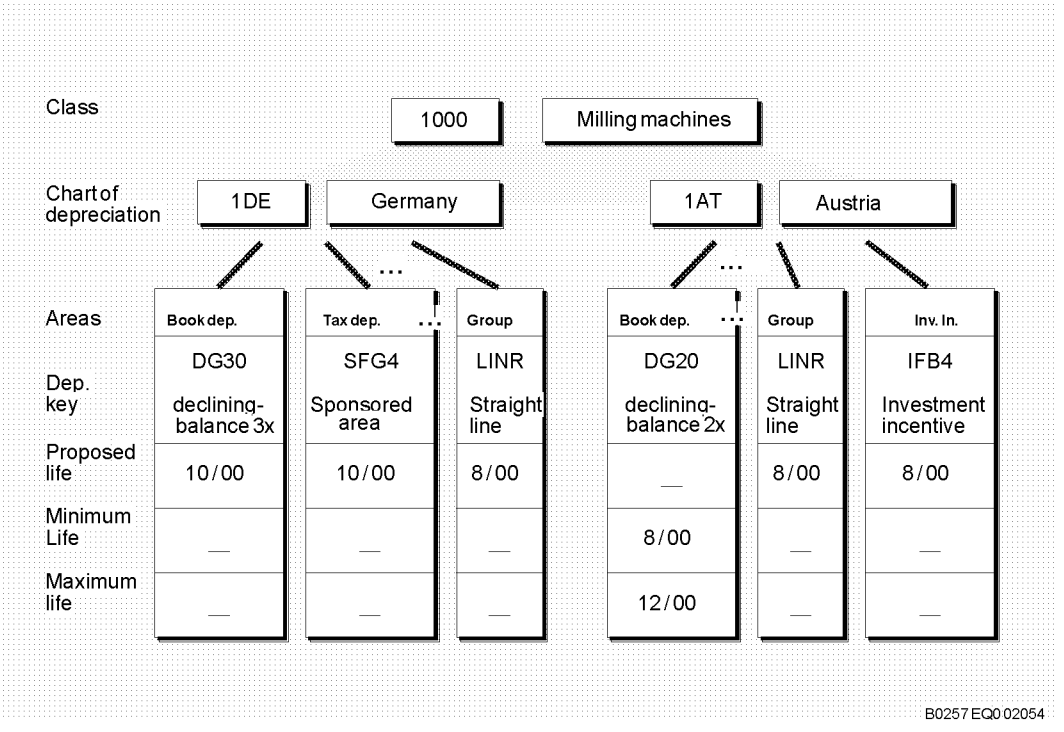


Fig. Asset classes in the chart of depreciation

If only one chart of depreciation is active in the system, maintenance of the asset classes is simplified. In the corresponding screens, the chart of depreciation is not displayed. The system uses the asset class as a key term and automatically assigns the chart of depreciation.

You must assign the asset class key externally. It can be alphanumeric and up to 8 characters long.

Default values

You should create reasonable business default values for sensitive control/valuation parameters of the asset master records in the asset class. The essential fields for this can be found in the asset class. You can define the screen layout control, so that these fields can no longer be changed at the master record level.

Other fields can only reasonably be maintained at asset level and/or asset component level (for example, insurance value) and, therefore, cannot be maintained in the asset class but only in the asset master record.

Control information (asset class general)

The asset class carries important control information for fixed assets. The general control parameters are managed at asset class level:

- **Number assignment**
  In the asset class, you must enter the number range from which the asset numbers of this class are to be assigned. You can specify the number range at company code level. It determines the number interval for the number assignment and determines whether the assignment of the main asset number is to be carried out externally or internally.

- **Sub-number assignment**
  In the standard version, the sub-numbers in the system are assigned in ascending order. In the asset class, you can specify that sub-number assignment is to be carried out externally. The sub-number must always be numeric.

- **Account allocation**
  The account allocation determines the control accounts that are posted to in Financial Accounting. You must enter the account allocation key in the asset class. When you create a fixed asset, the system checks whether the accounts defined in account allocation actually exist.

- **Screen layout control (master data)**
  Using the screen layout control, you can control the field selection, the required fields, and the maintenance level of asset master data. The screen layout you set up in the asset class applies to all asset master records of this class.
  There are screen layout controls for master data and for depreciation areas (see below).

- **Special functions**
  By means of a control indicator, you can define the status of the asset class for
  - financial assets
  - leased assets
  - assets under construction with line item management (if the "Investment Controlling" component is being used)
  - real estate (if the "Property Management" component is being used)

  Entering the status for leased assets and financial assets serves informational purposes only. Using the status for assets under construction activates line item management for any assets

belonging to this class. If no status indicators are set, the asset is treated as a normal fixed asset.

Control information (chart of depreciation)

For the charts of depreciation created in an asset class, you must specify the following control information per depreciation area:

- **Deactivation of a depreciation area**
  When you maintain an asset class, the system displays every depreciation area of the specified chart of depreciation. By deactivating depreciation areas, you can limit the value management of the fixed assets to the depreciation areas you need in your business. For example, you can deactivate the depreciation areas in a particular asset class that deal with investment support measures, if they are irrelevant for the assets in this class.

  Once you have created asset master records for a class, you should not deactivate depreciation areas. A separate utility function is planned for this.

- **Depreciation key and expected useful life**
  In order to guarantee the same depreciation terms for the class, you must specify the depreciation terms here.

- **Index series**
  If you would like to calculate with replacement values, you can specify an index series. However, there are prerequisites for calculating with index values. You must have provided for the possibility of revaluation when defining the depreciation area involved, and you must have used a depreciation key that allows you to depreciate from replacement values.

- **Screen layout (depreciation area)**
  You must specify the screen layout for every active depreciation area of the chart of depreciation created in the class. The screen layout determines the field selection, the required fields, and the maintenance level for the depreciation terms (for example, the depreciation key).

- **Control indicator**
  In the detail display of the depreciation area, you can specify the following control indicators typical for certain asset types:
  - activation of amount check for individually managed low-value assets
  - activation of the quantity and amount-related check for collectively managed low-value assets
  - allowing the managing of negative acquisition and production costs. This may be required for assets under construction, for instance.
  - Maximum/minimum useful life allowed

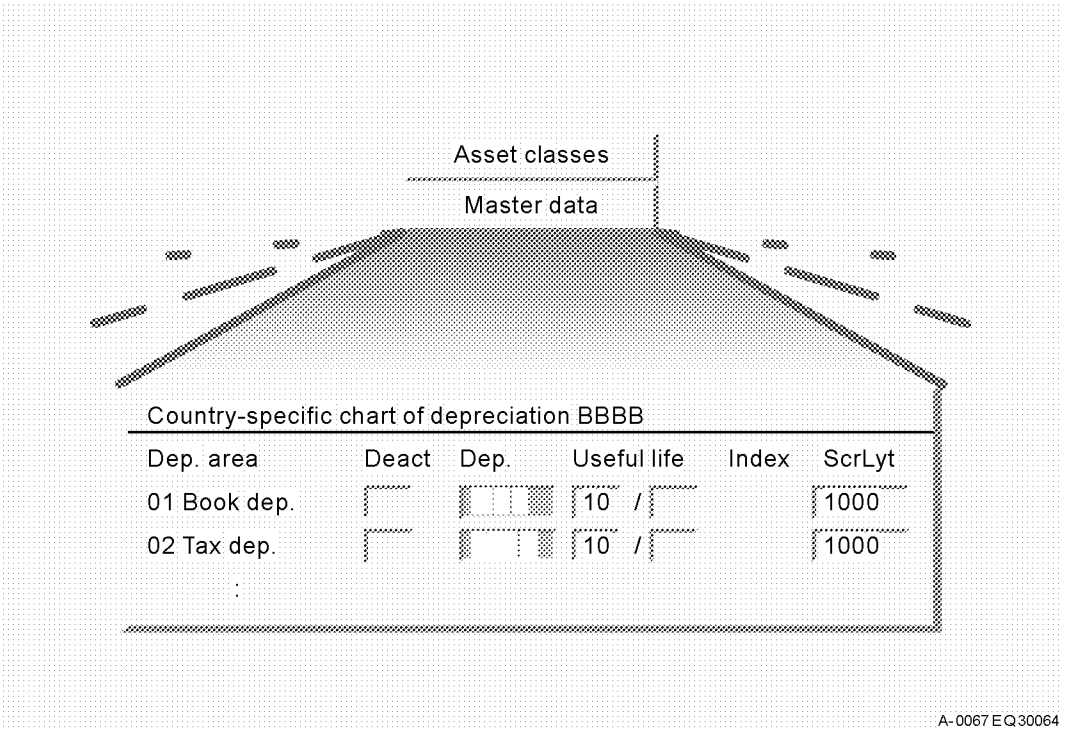


Fig. Chart of depreciation (asset class)

Details

Via *Details* you can specify, for certain asset classes, that transactions from particular transaction type groups can be posted to assets belonging to this class:

- down payments for assets under construction (transaction type groups 15 and 16)
- transfer of reserves (transaction type group 69)

In addition, it is also possible to display administrative data for each asset class. You can also create a long text in the asset class.

Caution
For reasons of performance, the tables of the asset classes are buffered to 100%. Since the data buffer is only updated at intervals, the creation of an asset master record for a new asset class is only possible after update of the buffer (update: approx. every 3 minutes).

Asset Types

Fixed assets are made up of a variety of different types of assets. The balance sheet represents this variety with the items

- o intangible fixed assets
- o tangible assets
- o financial assets

It is generally desirable to provide for a more detailed classification of assets according to so-called asset types. The system does not provide for predefined asset types. Every asset type is represented by an asset class that you define. There are certain control indicators in the asset class. The asset class can serve as a kind of sample master record for the assets in that class. You specify the fields to be maintained, as well as the required fields for an asset class in the screen layout. There is a special indicator in the asset class for the special asset types "leased asset" and "financial asset." In the following, special asset types and their special control features are listed:

Assets under construction

Assets under construction are a special form of tangible assets. They are usually displayed as a separate balance sheet item and therefore need a separate account allocation. Ordinary depreciation is not allowed for assets under construction. You can specify this by choosing the corresponding depreciation key in the book depreciation area. To ensure that this key is always used during master data maintenance, you should select the asset class as the maintenance level for the book depreciation area (see the topic Screen Selection and Maintenance Level). For certain assets under construction, special tax depreciations may be made. In this case you can also specify corresponding keys from the asset class.

If downpayments are to be posted, you must allow the posting of the transaction type group "Downpayments" in these classes (transaction type groups 15 and 16). In addition, you must enter the necessary General Ledger account in the account allocation. You should also activate the indicator for negative APC in the depreciation areas managing assets under construction. This allows subsequent credit memos to capitalized assets.

If the AM-IC component is installed, open item management of assets under construction is possible. You can settle the asset under construction specifically per line item to different receivers (see the topic Capitalizing Asset Under Construction). You activate this line item management when creating the asset, if the corresponding indicator is set in the asset class for assets under construction.

Low-value assets (LVA)

In general, LVAs are fully depreciated in the year of purchase or in the period of acquisition. This can be achieved by using the special depreciation key LVA and the expected useful life of 1 month (period). Using an expected useful life of 1 month has the effect that depreciation is fully posted in the acquisition month during the monthly depreciation posting.

When you create an asset history sheet, you can specify that asset retirement be simulated for any low value assets acquired during a specified time period. You specify this as one of the parameters when calling up the report. The affected assets then appear in the asset history sheet as retired. In this case, the system ignores any actual retirements of low value assets. You should be aware that choosing to simulate LVA retirement in the asset history sheet means that you are required to do the same in following years. Otherwise, the danger exists that LVA retirements could be listed in two asset history sheets (once as simulated retirement, and once as actual retirement).

You set the maximum amount for low value assets when defining the depreciation area at company code level. In order for the system to carry out the verification of the maximum amount for LVAs, you must specify either an individual check or quantity check. You make this specification in the depreciation area at the asset class level.

- **Individual check (individual management)**
  When the acquisition is posted, the entire acquisition and production costs of the asset are compared against the LVA maximum amount.
- **Quantity check (collective management)**
  When the acquisition is posted, the entire acquisition and production costs of the asset, divided by the total quantity, are checked against the LVA maximum amount. When you make your first posting, you must also post the quantity. (This method is used if you manage the low value assets collectively.)

Leased assets

Using the capital lease procedure in the R/3 AM System, leased assets can be capitalized, or handled as acquisitions in the cost accounting area (see the topic Valuation Methods for Leased Assets). To make this possible, you must enter all the essential leasing contract information in the the asset master record. In addition, you can allocate a leasing type in the asset master record. You define the leasing type in Customizing. The leasing type contains all the information for the acquisition posting. You can carry out the opening entry in the display transaction for asset master records (Menu: *Edit -> Opening entry*).

Intangible assets

The account control of the asset class for intangible assets must be allocated to the corresponding balance sheet position. If you want to post downpayments, you must specify in the asset class that posting is allowed with the transaction type group "downpayments."

Intangible assets are not normally physically retired, and therefore no retirement posting takes place. In the request screen of the asset history sheet, you can specify for the asset class for intangible assets that a retirement is simulated when the book value reaches zero. The affected assets then appear in the retirement column of the asset history sheet.

Financial assets

You can provide financial assets with a special status by setting the indicator for financial assets in the asset class. You must select the depreciation keys in the depreciation areas in such a way that regular depreciation is not carried out.

The "Financial Assets Management" component of the R/3 FI System offers special functions for managing financial assets.

Technical assets

Technical data can only be managed to a limited extent in the asset master record. However, you can enter as much technical description as you want via the long text function. This option is available for all fixed assets. If separate master records are to be created as technical assets, you should deactivate the book depreciation area for these fixed assets in order to prevent posting taking place.

You can enter detailed technical information for the maintenance of equipment in the R/3 PM (Plant Maintenance) System. This information is specified in the functional location and the equipment master record in PM. You can use a field in the equipment master record to allocate the piece of equipment to a specific asset. There will also soon be the option to classify assets according to given attributes (field contents). It will then be possible to add new fields to the asset master record in accordance with this new classification. These new fields could then, for example, also

be used for technical information.

Other asset types

The Asset Management System is not intended for the special demands of financial assets such as loans and management of securities, renting contract management of residential buildings, or detailed land register management for real estate. For more information on this, see the component in FI-FA on the management of securities and loans. For managing technical information for asset maintenance and maintenance of assets parts, the component Plant Maintenance AM-EQ is being planned.

The following figure is an overview of the most important asset types and their special control features:

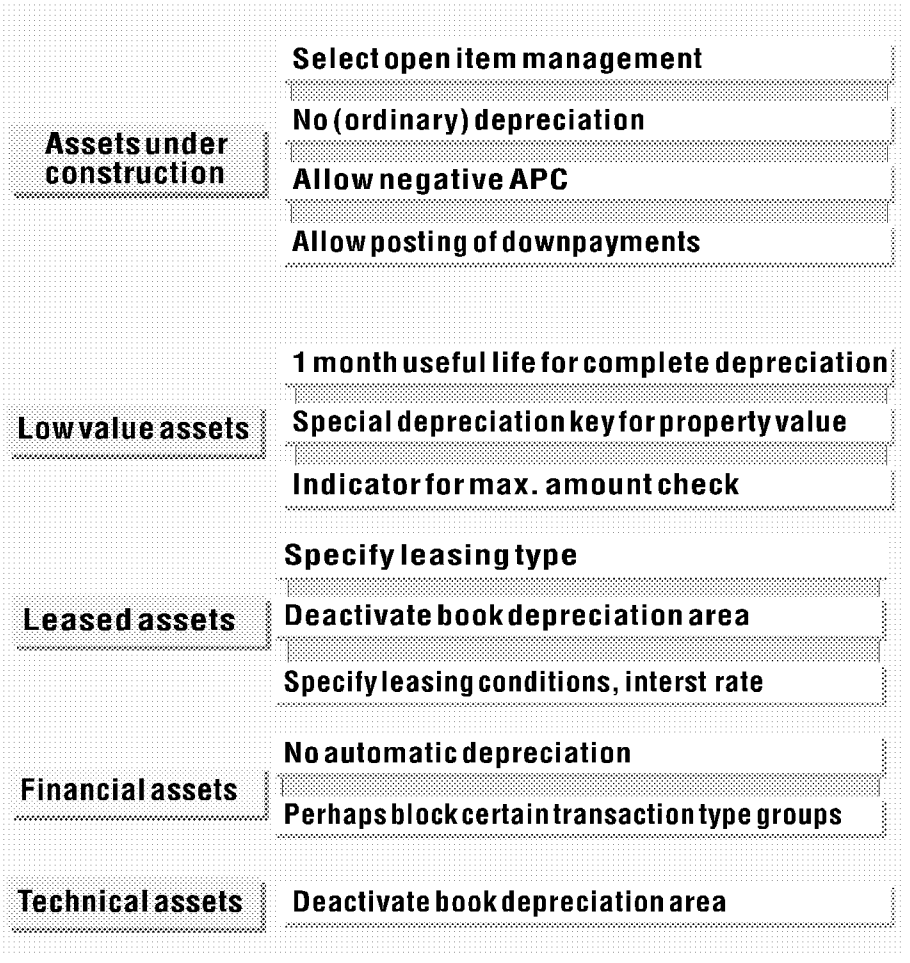


Fig. Special Asset Types

Representing Assets in the System

The data structure of the AM System allows you to represent your assets in a four-tiered hierarchy:

- On the uppermost level you have a collective asset which encompasses as many separate individual assets as you want (asset group number).
- The individual asset itself constitutes a useable asset in its own right and is treated as a valuation unit. It contains specifications for valuation of the asset as well as for business purposes (asset main number).
- An asset can be further sub-divided into its component assets (asset sub-number).
- On the lowest level you have the transaction data which belong to the respective master data as acquisitions or retirements (line items).

Transaction data

The term "asset" is used for simple assets, as well as for complex large-scale assets which consist of several component assets. The data structure of the system with a 12 character alpha-numeric main asset number and a 4 character sub-number allows both. The main asset number represents the asset. Parts of assets can be displayed by different sub-numbers. Every master record is automatically set up with at least one sub-number. The system marks the first master record as an asset main number master record. With internal sub-number assignment, this main number has sub-number "0000". You can set up further sub-numbers for this main number master record. The system manages values for each sub-number for every individual depreciation area in yearly segments. The individual transactions are posted directly to the sub-numbers as so-called line items.

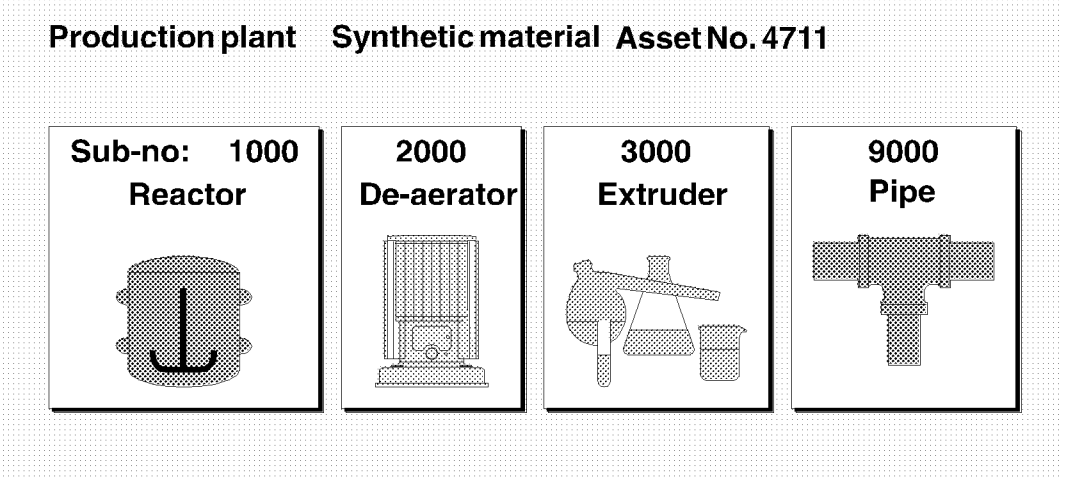


Fig. Main Asset with Sub-numbers

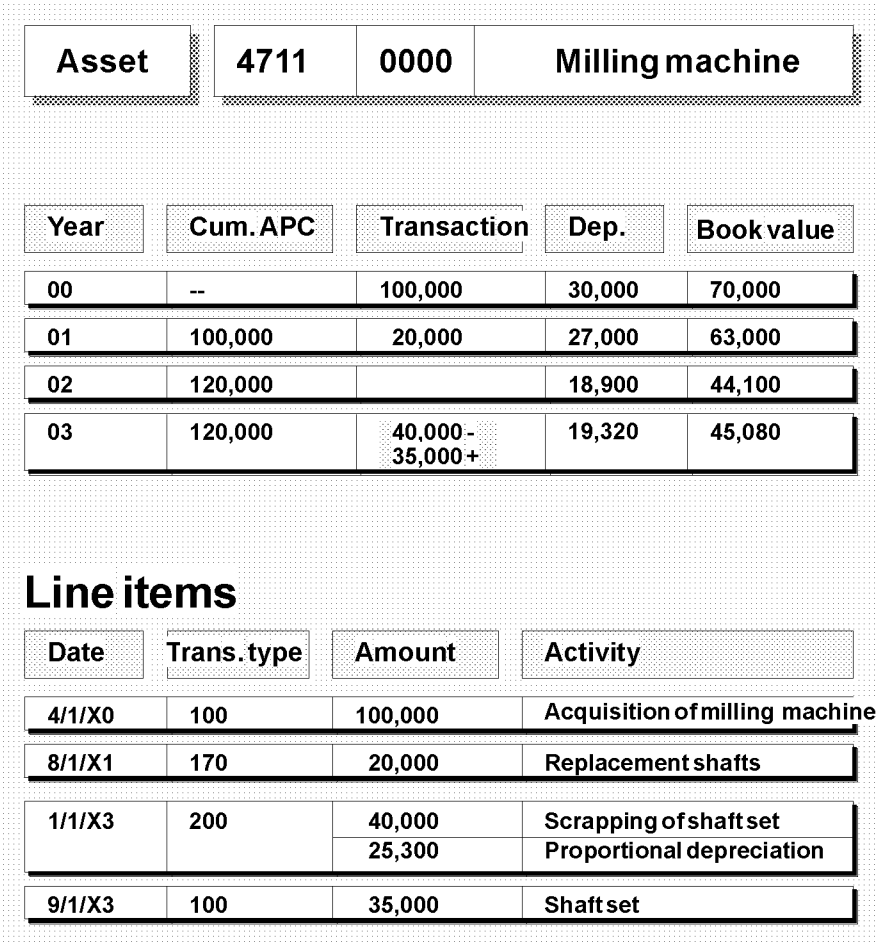
Simple asset

A simple asset is represented by only one asset master record. This master record has the sub-number "0000". Subsequent acquisitions are posted to this master record. You can meet the most essential business and legal demands with year segments (provided they have not yet been reorganized) and transaction dates.

However, the representation of the asset as a simple asset is limited in the following ways:

- You cannot separate the accumulated depreciation and book values from closed fiscal years according to year of acquisition for a simple asset.

- Furthermore, you have no option but to depreciate subsequent acquisitions in a uniform way over the remaining useful life of the first acquisition.



Asset	4711	0000	Milling machine

Year	Cum. APC	Transaction	Dep.	Book value
00	--	100,000	30,000	70,000
01	100,000	20,000	27,000	63,000
02	120,000		18,900	44,100
03	120,000	40,000 - 35,000 +	19,320	45,080

Line items

Date	Trans. type	Amount	Activity
4/1/X0	100	100,000	Acquisition of milling machine
8/1/X1	170	20,000	Replacement shafts
1/1/X3	200	40,000	Scrapping of shaft set
		25,300	Proportional depreciation
9/1/X3	100	35,000	Shaft set

Fig.Subsequent Acquisitions without Sub-numbers

Complex asset

If an asset consists of several component assets, it may make sense, from a commercial or technical point of view, to monitor the individual sub-assets separately. For complex assets, for example, there is often a need for uniform depreciation of the entire asset in the book depreciation and tax depreciation areas, whereas for cost accounting purposes, the sub-assets should be depreciated separately. You must then set up the sub-assets as sub-numbers.

There are several reasons for managing sub-assets as sub-numbers:

- separate value development for parts of assets
- different cost accounting allocation of the sub-assets (for example, to different cost centers)
- division of the fixed asset along technical lines (for example, link to equipment in Plant Maintenance)
- If it is necessary to manage subsequent acquisitions separately in order to be able to monitor their depreciation and book values separately, you must manage these acquisitions with independent sub-numbers. For all subsequent acquisitions, a new sub-number is to be created per year of acquisition. You can guarantee that this takes place by setting the flag "acquisition only in the capitalization year" in the depreciation key.

The following diagram shows the treatment of subsequent acquisitions to complex assets :

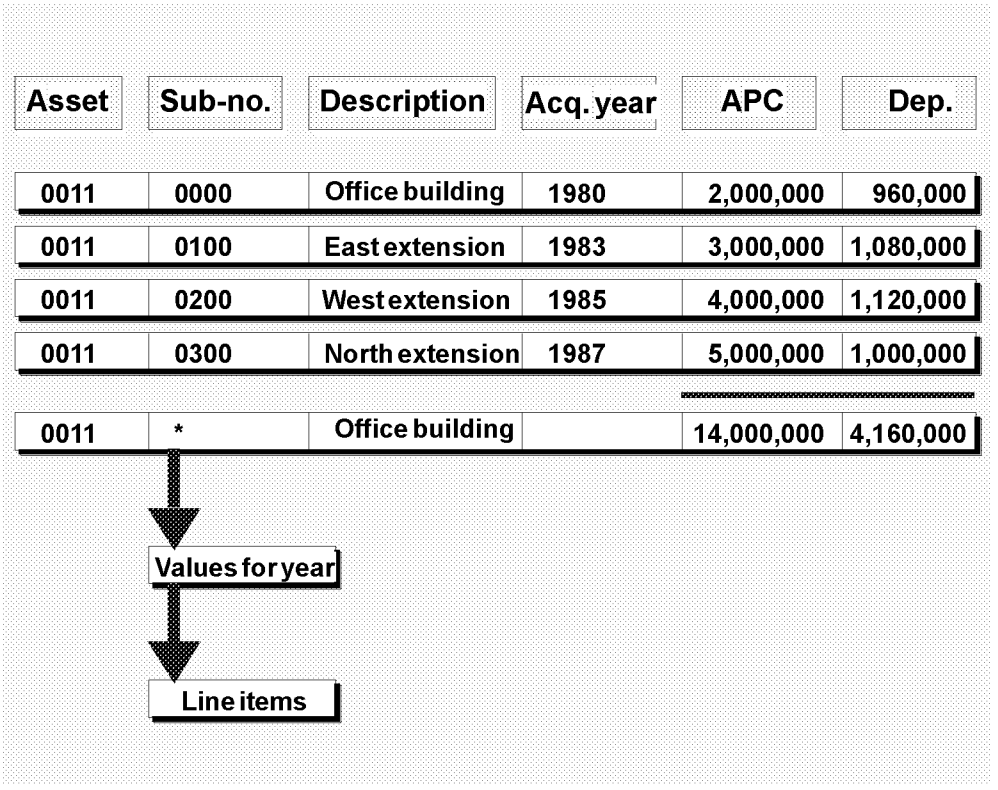


Fig. Subsequent Acquisitions with Sub-number

When allocating the sub-number, it can be advantageous not to leave sub-number assignment to the system, but to specify the numbers externally. In this way you can classify the asset individually. In order to be able to monitor the value development of subsequent acquisitions to sub-assets (for example, upgrading or replacement acquisitions) separately according to years of acquisition, it is recommended that you use the following system for sub-number assignment.

Reactor	Extruder	Piping	Extractor
Sub1093 Acq yr1993	Sub2093 Acq yr1993	Sub3093 Acq yr1993	Sub4093 Acq yr1993
Modification **Modification**			
Sub1094 Acq yr1994			Sub4094 Acq yr1994

By means of the screen layout control for the asset class (see the topic Screen Selection and Maintenance Level), you can determine whether the depreciation terms can be maintained at the sub-number level. You can also specify in the screen layout control that uniform depreciation be carried out for all sub-numbers belonging to a main number. This specification will ensure that the evaluation and depreciation of all sub-numbers is identical, and that depreciation is calculated using the identical depreciation terms. To carry out changes to asset master data that are uniform for all

sub-numbers, enter "*" in the sub-number field in the initial screen of the change transaction. The system then carries out the changes made at the main number level for all sub-numbers.

In the display transactions and in reports, you can display asset values either individually by sub-number, or collectively. For displaying the asset values, you can also enter "*" in the sub-number field in order to obtain totals for all sub-numbers. Partial summations are possible by entering the sub-numbers in the following form:

1*	- sub-numbers from 1000 - 1999
01*	- sub-numbers from 0100 - 0199
001*	- sub-numbers from 0010 - 0019

Caution
*It is **not** possible to represent negative acquisition costs (for example, for investment support measures) in the form of negative sub-numbers in the AM system. The sytem offers other special methods for handling investment support (see the topic Investment Support Measures).*

Asset group number (collective asset)

You can use the asset group number to allocate a number of assets to a single object. This can be useful, for example, for the following reasons:

- For the valuation of net assets within the framework of real estate management, you can group a number of assets, which are valued independently, into a single economic unit.
- Within the framework of modern, process-oriented organizational structures, the structuring of assets is characterized by the classification of a number of assets as asset complexes (for example, production lines with various processing equipment, flexible production systems). For these situations, the asset group number offers another means of classifying the asset, in addition to the asset main number and sub-number. You can also use the asset group number for reporting purposes.

You allocate assets to an economic unit by entering the common asset group number in the asset master record. You can either create the asset group number as a separate master record, or simply use it as a sort criterion. If you want to manage master data at the asset group number level, you must create a statistical asset master record (without values) for the asset group number. At the present time it is not possible to carry out evaluation of the assets in an economic unit at the asset group number level.

You can enter the asset group number as a selection criterion for all standard reports (see the topic Standard Reports). In this way, you can select all assets belonging to an asset group number for evaluation. In addition, you can use the asset group number as sort/total criterion for sort versions for standard reports (see the topic General Functions and Sort Versions).

Master Data Maintenance

The varied demands on master data management for Asset Accounting are met in the R/3 AM System by

- asset master records that are structured according to functional and goal-oriented requirements
- master data maintenance that is organized according to this structure, and allows for individual adaptation.

In order to make it easier for the user to create, maintain and evaluate master data, the varied individual information is structured according to its area of use and the relevant functions in the system.

The asset master record consists of two main parts:

- **General master data**
  This part of the master record contains concrete information about the fixed asset. The following field groups exist for the various usages:
  - General information (description, quantity, etc.)
  - Account assignment information
  - Posting information (for example, capitalization date)
  - Time-dependent allocations (for example, cost center)
  - Information for plant maintenance
  - Information for financial assets management
  - Real estate information
  - Leasing conditions
  - Investment support measures
  - Information on the origins of the asset
  - Physical inventory data
  - Insurance data
  - Evaluation groups

- **Data for evaluation of the asset**
  You can specify all depreciation terms in the asset master record for all depreciation areas in the respective chart of depreciation. In order for you to make these specifications, the master record contains an overview of the areas. In addition, there is a detailed display available for each depreciation area. The following diagram shows the most important depreciation terms in a depreciation area:

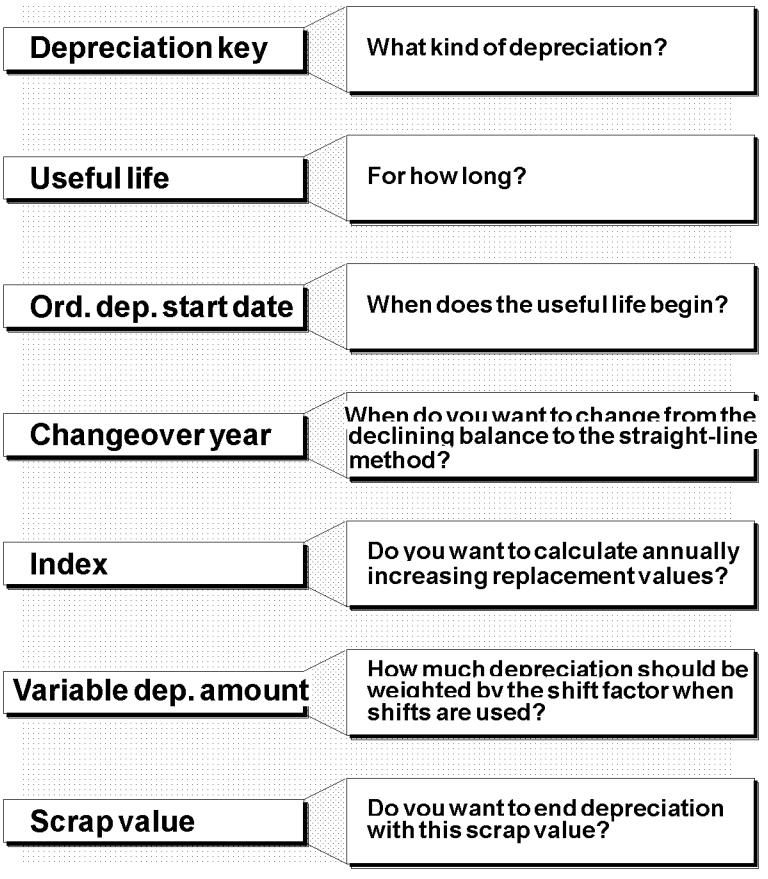

Depreciation key
What kind of depreciation?
Useful life
For how long?
Ord. dep. start date
When does the useful life begin?
Changeover year
When do you want to change from the declining balance to the straight-line method?
Index
Do you want to calculate annually increasing replacement values?
Variable dep. amount
How much depreciation should be weighted by the shift factor when shifts are used?
Scrap value
Do you want to end depreciation with this scrap value?

Fig.: Information for evaluation

Number Allocation

The asset number clearly identifies a fixed asset. It always consists of the main asset number and the asset sub-number. There are two ways of carrying out number assignment in the system:

- o external number assignment
- o internal number assignment

In the case of external number assignment, the user must directly assign the asset number. The system will only display the defined number interval and issue an error message if a number is already assigned. In the case of internal number assignment, the system automatically assigns consecutive numbers.

Number range intervals

You can define the number ranges at company code level. In Customizing for the asset class, you can determine the number range per company code and whether assignment from a number range should be carried out externally or internally. Alphanumeric intervals can only be assigned externally.

You should choose sufficiently large intervals since an extension is not possible if the extension already belongs to another interval. When you reach the last 10 percent of the maximum assignable asset numbers of an interval, the system notifies you that the number interval will soon be exhausted. When the last number of the interval has been assigned, the system issues a further warning. You should pay attention to this note and extend the intervals in time or assign a new number range for the asset classes involved.

Cross-company code number assignment

If several company codes are to have a cross-company code uniform number assignment, you can maintain the number range in a company code, and allocate the further company codes to this company code for the purpose of number assignment.

Cross-company code number assignment in Customizing:

Company code 0001	Company code 0002
Num.assg.C.c. 0001	Num.assg.C.c. 0001

Example of a cross-company number assignment in temporal sequence:

	CCode 0001	CCode 0002
1st fixed asset	10001	
2.	10002	
3.		10003
4.		10004
5.	10005	
6.		10006
7.	10007	

Asset main number

The main asset number has 12 alphanumeric characters. Number assignment is controlled by the asset class. You can determine the number range for an asset class in the asset class. In this way you achieve the same number assignment for all classes. By specifying a correspondingly defined number range, you can choose between external and internal number assignment. Several asset classes can use the same number range.

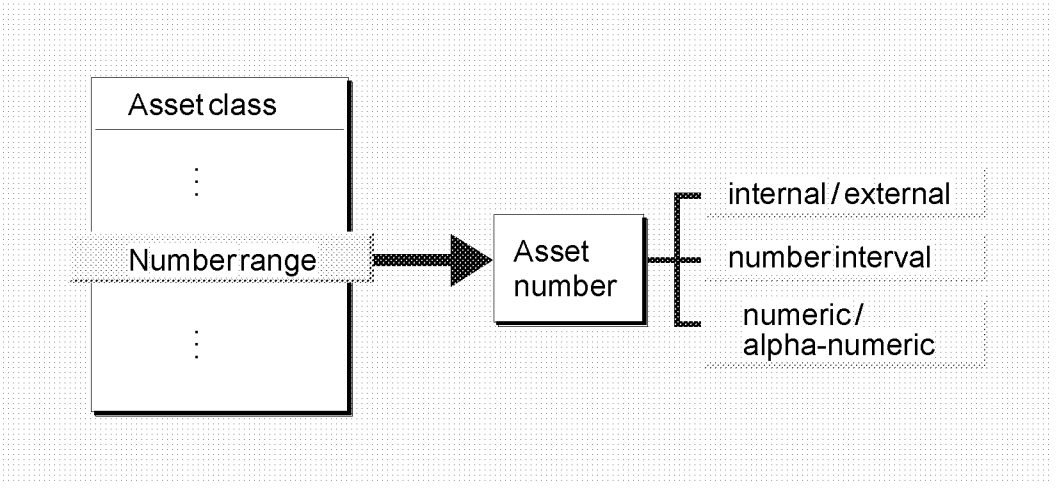


Fig. Asset Classes and Number Range

Asset sub-number

The asset sub-number has four numeric digits. You determine whether the sub-numbers are to be assigned externally or interna

lly in the asset class. The first sub-number is assigned at the same time as the main number and is noted as a main asset master record. You do not have to define number ranges for the sub-number assignment.

In the case of internal assignment, the sub-numbers are assigned consecutively per main number starting with "0000".

In the case of external allocation, you can use your own method for for assigning numbers. It is recommended that you devise your own method, especially for complex fixed assets that have component parts. In this way, you can evaluate the sub-numbers for certain asset components at the same time by using the generic selection of sub-numbers.

Screen Selection and Maintenance Level

You specify the field attributes in the asset master record. The maintenance level of the fields is carried out using screen layout control. You can define as many types of screen layout control as you need, and set them up in the respective asset classes. There is screen layout control for

- general master data
- depreciation terms in the master record (depreciation areas)

In each screen layout control, you can make specifications for the individual field groups. The corresponding maintenance fields are allocated to every field group.

Screen layout control ---> Field groups ---> Individual fields

The field groups with their respective fields are defined in system tables. When defining the screen layout, the system proposes all existing field groups to be maintained individually. You can define specifications for the screen layout, for the maintenance level and you can specify whether the field contents can be copied as a reference.

Standard screen layout

SAP delivers several predefined screen layout controls. In regard to depreciation terms (areas), the system offers the following depreciation procedures:

- Depreciation on sub-number level
- Depreciation according to asset
- Depreciation according to asset class

Screen layout

With the screen layout, you can control whether the fields of the field group are obligatory fields, optional fields, display fields, or whether they should be suppressed completely (that is, not appear at all in the screen selection). For obligatory fields, an entry is always required in master data maintenance. You can choose whether to make entries in optional fields. You can define field groups as display fields only if the system has determined them as such (for example, insurance value). If you suppress all field groups of a screen, the screen is not displayed during master data maintenance.

By using the control options of the screen layout, you can guarantee that the necessary business fields are processed for each asset class. Every field group can have only one value in the screen layout.

Maintenance level

For every field group of the asset master record, you can determine one maintenance level. The maintenance level determines on which asset classification level a field group may be maintained.

In the system there are the following maintenance levels:

- asset class
- main number
- sub-number.

You can allocate the following maintenance levels to a field group:

- **Only asset class**
  If you determine the asset class as the only maintenance level for a field group, you will not be able to maintain the fields on main or sub-number level. The fields are only available for display when creating master records. The values of the asset class are copied. Subsequent changes to the field values are not taken over in the master records, but only apply to newly created

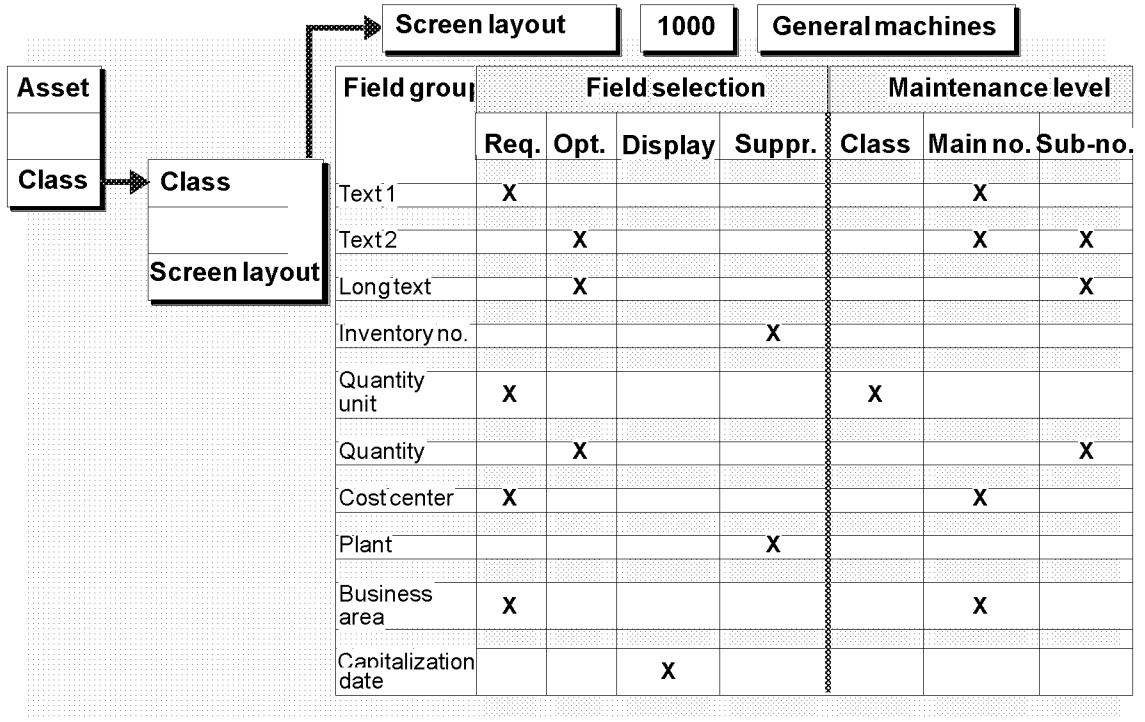
assets.

- **Only main number**
  If you only specify the maintenance level "main number" for a field group, you can only process the fields when creating or changing the main number. The values of these fields are automatically copied to sub-numbers created later, and can no longer be changed there.
- **Only sub-number**
  If you only specify the maintenance level "sub-number", you can maintain the field group on the main and sub-number level.
- **Main and sub-number**
  If you specify the maintenance level as main and sub-number, the field group from the main number is proposed as a default value during maintenance of the sub-numbers, but can still be changed.

Copying via reference (when creating master records)

When creating an asset from a reference asset, you can control via the screen layout whether certain field groups in the target asset can be completed with values from the source reference asset. You should not complete all fields by copying from the reference asset. It makes sense to maintain some of these fields separately for each asset (for example, the base insurable value and other value fields containing insurance data).

The following diagram shows an example of screen layout control:



Field group	Field selection				Maintenance level		
	Req.	Opt.	Display	Suppr.	Class	Main no.	Sub-no.
Text 1	X					X	
Text 2		X				X	X
Long text		X					X
Inventory no.				X			
Quantity unit	X				X		
Quantity		X					X
Cost center	X					X	
Plant				X			
Business area	X					X	
Capitalization date			X				

Fig. Screen Selection and Maintenance Level

Caution
You cannot define a maintenance level for fields which are suppressed via the screen selection.

Views Concept

Asset view also has controlling influence on master data maintenance in addition to its function as an authorization (see topic Authorisation). For every asset view, you can determine which field groups of the master record are maintained, only displayed or suppressed in the view.Master record maintenance

The creation of main and subnumbers is only possible from view 1, which is defined as view "Asset Accounting" in the standard version. To avoid inconsistencies between the field status group and the view control when creating a master record, you should define this view in such a general way that it allows you to maintain all field groups that are defined as obligatory fields in a field status group.

If the field maintenance from the field status group is inconsistent with the asset view, the field parameter default takes precedence. This results in a more stringent protection of the field.

Access to depreciation areas

Along with the definition of the depreciation areas, a view allocation is also possible. However, you can only make specifications for the entire area here and not for individual field groups. You should also have authorization to maintain view 1 here.

Classification Criteria

In addition to the pre-defined organizational structures of the Asset System, the evaluation groups allow you to classify the assets via a feature in the master record. For this purpose, you can define evaluation groups in Asset Customizing. They can be either 8 characters or 4 characters in length. You define their specific features and meanings. The features may be alphanumeric.There are five evaluation groups in the asset master record that you can use in parallel (four that have 4 characters, and one with 8 characters). Using the screen layout control, you determine whether the evaluation group is a required entry field during master data maintenance. You can use the evaluation group as a sort criteria when running reports.

Example of evaluation groups and their features:

NR	Eval	Descr.
1	SOFT	Software
1	HARD	Hardware
...		
2	PCBS	PC operating system
2	PCAW	PC user software
2	PCTO	PC tools
2	UXSO	UNIX software
2	UNIX	Unix hardware
2	3270	3270 hardware
...		

Time - depency

Certain business allocations in the life cycle of an asset are subject to changes, which should be maintained in a historical record for valuation and information reasons. An example of this is the allocation of an asset to a cost center or multiple-shift usage of an asset in a certain period.Time-dependent allocations

The system, therefore, allows you to store the following allocations for different time intervals in the asset master record:

- cost center
- plant
- activity
- cost order
- location
- room
- multiple-shift factor
- shutdown indicator
- plant maintenance job order
- plant maintenance project
- business area (only if no business area balance sheets are created)

Data is stored in an unbroken sequence (contiguously) to the day with a "valid from" and "valid to" date. When you access a master record, the time-dependent data, valid for the date of the request, will always be displayed. If an allocation has other characteristics in other time periods, this is documented by "*" in the background of the field description. With the "Field breakdown" function, you can display the characteristics of a field in the different intervals.

Time Intervals

You can display the available periods and select them for maintenance. If you want to specify an allocation from a certain point, you must first specify the new period. The system processes the data of the new interval and takes over the original allocations. The new interval can then be maintained.

Example of maintaining a time-dependent allocation for a cost center:

1. available interval is displayed

valid from	valid to	cost center
01/01/1992	12/31/9999	1000

2. specify new interval

07/01/1992 - 12/31/9999

3. data can be maintained

valid from	valid to	cost center
07/01/1992	12/31/9999	1000

4. cost center 1000 changed to 2222

valid from	valid to	cost center
07/01/1992	12/31/9999	2222

5. internally available intervals:

valid from	valid to	cost center
01/01/1992	06/30/1992	1000 <--- automatically created
07/01/1992	12/31/9999	2222

Match Code

In the Asset Accounting system, the matchcode is used as a search function for the asset classes and the asset master data.Asset class

Two matchcodes are defined as standard for the asset classes:

- A - account allocation

  The matchcode A allows the search via the account allocation and the asset class short text.
- B - charts of depreciation / depreciation keys

  The matchcode B allows the search via the chart of depreciation and the depreciation key of depreciation area "01".

Asset master data

The following matchcodes are defined as standard:

- A - general matchcode

  The matchcode allows the search via account allocation, asset class, and description.
- B - depreciation key

  The matchcode allows the search via depreciation keys, depreciation area, and LVA control.
- C - cost center

  The matchcode allows the search via cost center, plant, and business area.

The standard matchcodes are all updated simultaneously and are available with the standard transactions for the "asset class" and "asset number" fields. You can define further individual matchcodes in Customizing. Since the simultaneous matchcode update procedure is very taxing on the performance of the system, you should use the non-simultaneous update procedure, when required, for your own matchcodes.

Deactivate - Delete - Block

The System supports the removal of an assets from the asset portfolio in the following manner:Deactivation

If you scrap a fixed asset or sell it, the fixed asset automatically receives a deactivation date from the corresponding posting. In the event of a reversal of this transaction, the System cancels this date. If you want to post subsequent additions to the fixed asset, you can also cancel the deactivation date manually in the master record.

You can remove deactivated assets from the data base and transfer them to an archive file. Bear in mind, however, that the representation of the development of the fixed assets in the asset history sheet also frequently encompasses the transactions from the previous year and for this reason the deactivated assets of the previous year should not be deleted.

Deletion

If you would like to delete a master record, where no postings have taken place, you have the following possibilities:

- With the deletion transaction for master records, you can physically delete a master record manually.
- By setting the delete indicator with the same transaction, you can earmark a master record for deletion. A separate program physically deletes all selected master records from the data base.

Blocking

If you set the block indicator in the asset master record, you can no longer post acquisitions to this fixed asset. The idea behind this, for example, is to prevent future postings to an asset under construction once the project is complete for business purposes.

Transfers and asset retirement postings to blocked fixed assets are possible.

Fixed Asset Depreciation

The calculation of depreciation, interest, and appreciation is controlled in the system via keys that can be modified. In this way, you can define the valuation methods individually.The following text describes the control options for depreciation calculation and possible depreciation methods. In addition it showes some depreciation keys, which are delivered for the U.S.A.

Depreciation Types

Depreciation Calculation

Depreciation Key

Internal Calculation Key

Period Control

Cut - off Value Key

Depreciation Methods

Straight - line Depreciation over Total Useful Life

Straight - line from the Book Value over Remaining Useful Life

Declining - balance Method of Depreciation

Declining Multi - phase Depreciation

Declining - balance Method According to Japanese Requirements

Sum - of - the - years - digits Method of Depreciation

Mean Value Method

Depreciation for Multiple - shift Operation and Closure

Unit - of - production Depreciation

Examples U.S.A.

Composition of Asset Values

Depreciation Types

You can specify which depreciation or valuation types are to be managed for each depreciation area. The following depreciation or valuation types are supported:

- **Ordinary depreciation**
  Ordinary depreciation is the planned deduction for wear and tear during normal use of an asset.

- **Special depreciation**
  Special depreciation represents deduction for wear and tear on an asset from a purely tax-based point of view. This form of depreciation allows a percentage depreciation, possibly staggered, within a period allowed by the tax authority, without taking into account the actual asset depreciation.

- **Unplanned depreciation**
  Ordinary depreciation reflects the deduction for wear and tear during the normal use of the asset. Unusual influences, such as damages which lead to a permanent decrease in the value of the asset, are covered by unplanned depreciation.

- **Transfer of surplus reserves**
  The transfer of surplus reserves allows you to reduce the depreciation base of an asset by a reserve.

  We can illustrate the use of this application using paragraph 6b of the German Income Tax Code. According to this paragraph, you are allowed to transfer a reserve to a replacement acquisition when you write back the reserve. As a result you can distribute the taxation effect from the write-back over the expected useful life of the replacement acquisition.

- **Interest**
  For internal accounting purposes, it is also relevant to evaluate the fixed capital tied up in an asset in addition to the depreciation. You can account for the tied up capital by calculating cost-accounting interest.

Depreciation Calculation

The depreciation calculation is based on the control parameters explained below.

Caution

Note that changing the Customizing definition of these control parameters (depreciation keys) does not automatically lead to a correction of depreciation values that have already been calculated for individual assets.

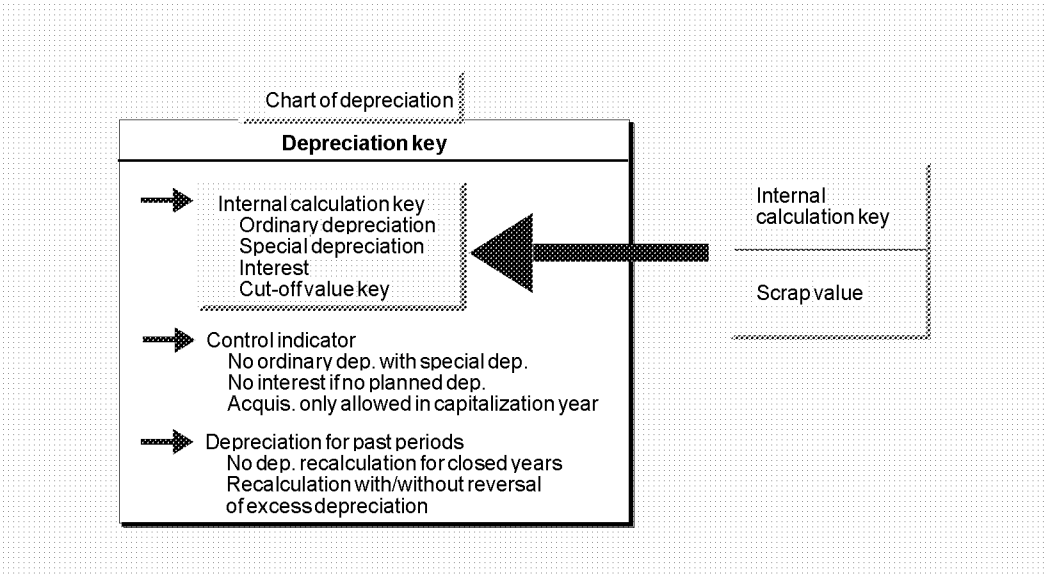
Depreciation Key

The depreciation key (external) contains the value settings which are necessary for determining the depreciation amounts. It represents a combination of calculation rules, which are to be used for the automatically calculated depreciation typeso

- ordinary depreciation
- special depreciation
- cost-accounting interest.

Here you can also specify how to treat inter-dependencies between the depreciation types or how to correct the depreciation already calculated if the calculation rule is changed. Each depreciation key contains an internal calculation key for calculating the actual depreciation. There is one internal calculation key for each type of automatic depreciation.

The following diagram shows the composition of the depreciation key:



Dia.: External Calculation Key

Cut-off value

The depreciation of an asset can be carried out to book value zero or to a globally determined memo value. Based on legal regulations (for example, property law), depreciation can be ended when a cut-off value is reached. By allocating a cut-off value key to the depreciation key you can provide for this eventuality.

Country-specific depreciation terms

The depreciation keys are defined at chart of depreciation level. With the help of the depreciation keys defined within a chart of depreciation, you can set up the chart of depreciation according to the special valuation rules of an economic area (country, geographical region and so on) with uniform depreciation terms.

Internal Calculation Key

The system uses internal calculation keys for the calculation of depreciation, imputed interest, and cut-off values. For these functions, you can enter an internal calculation key in the respective valuation (depreciation) keys. The internal calculation key defines the parameters for the depreciation calculation program. The calculation key is, therefore, an integral part of the dystem and should not be altered. If you need to adapt the key for legal or commercial reasons, you should copy the depreciation key and make the alterations to the copy. The key of the calculation key that you created should begin with X or Y.The control parameters of a calculation key can be divided into the following groups:

Depreciation methods

The calculation method is the most important characteristic of the key. The calculation method enables the system to carry out the various depreciation methods. Depending on its formation, the system determines which further control parameters need to be specified and which need not be specified. The system makes the distinction between the following calculation methods:

- **Percentage rate from useful life**
  There are two versions of this method. In the first, the system determines a depreciation percentage rate from the total useful life; the rate remains the same for each year. The second version calculates aa new percentage rate for each year based on the remaining useful life. In this version, the depreciation percentage rate rises constantly and then reaches 100% in the last year of the useful life.

- **Total percentage rate in the tax concession period**
  This method allows you to write off a certain percentage rate from the depreciation base. In order to calculate the current periodic depreciation, the system first determines the accumulated depreciation up to the period under examination. The periodic depreciation results from the difference between the already existing depreciation and the total depreciation allowed. With subsequent acquisitions, the system automatically catches up depreciation from previous years in a lump sum.

- **Explicit percentage rate**
  In contrast with the total percentage rate, here you must specify the percentage rate for each fiscal year. The system uses this percentage rate for calculating each periodic depreciation. For example, you can write off 3.5% in each of the first 12 years, then 2% a year for 20 years and 1% per year for the remaining 18 years. The total resulting from the useful life and the depreciation percentage rate is logically always 100%, so that complete depreciation is always reached by the end of the useful life.

- **Percentage rate from remaining life + changeover date - depreciation start date**
  This method is used as a changeover method following depreciation within the tax exemption period of an investment support measure. The remaining value of the asset will be written off over the total useful life at the end of the tax exemption period (that is to say, the actual depreciation period encompasses the tax exemption period plus the determined total useful life).

- **Mean value from several areas**
  When defining the depreciation areas, you can establish inter-area dependencies by specifying a linking formula. Method "M" allows you to calculate the depreciation from one area from the depreciation in in another area using the linking formula. In this way, for example, the mean value can be exactly calculated from straight-line method method depreciation and from declining balance method of depreciation.

- **Unit-of-production method of depreciation**
  Unit-of-production depreciation is based on the output-related use of the asset. By specifying a total output and/or a total number of units and exact output per period, or exact unit of production output figure per period, the sstem determines the resulting depreciation for each period. Output specifications are made at depreciation key level. An internal calculation key should, therefore, be adequate for this depreciation procedure if the internal calculation key contains information telling the system that the required depreciation method is unit-of-production method of depreciation.

- **Depreciation over remaining units of production**
  In the same way as the unit-of-production method of depreciation, the amount of the depreciation here is dependent on output. In contrast to the unit-of-production method of depreciation, the system uses the remaining units of production and not the total units of production to determine the periodic depreciation. Depreciating via remaining units of production ensures that, for post capitalization, the book value comes to zero when the total output or the total units of production is reached.

- **Sum-of-the-years-digits method of depreciation**
  An arithmetic sequence is set up based on the total useful life. The depreciation percentage rate falls proportionally relative to the respective remaining useful life.

- **Depreciation according to the present value portion of lease installments**
  This depreciation method is designed for leased assets that have been capitalized using the capital lease procedure (see Topic Valuation Methods for Leased Assets). The depreciation amounts correspond here to the present value of the periodic lease installments. The interest is determined as the difference between the lease installment and the present value.

- **Declining-balance method of depreciation according to Japanese regulations**
  (see Topic Declining - balance Method According to Japanese Requirements)

Base value

The base value is closely linked to the selection of the calculation method. Since it is not possible to logically link each calculation method with each base value, the base value usually comes fixed with the calculation method. The following base values are defined in the system:

- acquisition value
- acquisition value less unplanned depreciation
- half acquisition value
- replacement value
- half replacement value
- current net book value without special depreciation
- average net book value without special depreciation
- current net book value
- average net book value
- accumulated ordinary depreciation
- accumulated special depreciation
- sum of accumulated ordinary and special depreciation

Caution
Since revaluation takes place with reference to a specific point in time and not according to period,

the system does not calculate a mean value for the annual revaluation proportion of the asset value when calculating the average net book value.

Period control

For determining the depreciation start and end date for asset transactions, you can set an appropriate period control in the four transaction types

- o acquisitions
- o subsequent acquisitions/post capitalization
- o transfers and
- o retirements.

This enables you to set the depreciation start date for all acquisitions within the same year to the beginning of the year, for example. You can then set the depreciation start date for retirements for the first or last day of each period. The most important rules of thumb will be automatically created by the system when you set up a company code. You can, however, add to these rules as much as you like (see Topic Period Control).

Levels

You can divide calculation methods which use a percentage rate from the useful life, a total percentage rate or periodic percentage rate as a base for depreciation into as many levels as you like. A level, in this sense, represents the period of validity of a certain percentage rate. This percentage rate is then replaced by a subsequent percentage rate after the period of validity has expired.

You determine the validity period for the individual levels of a key by specifying the year and month. You can choose whether the defined validity period begins with

- o the capitalization date of the asset
- o the start date for ordinary or tax depreciation
- o the original acquisition date of the asset under construction.

The defined time periods of a key always have a common start date. This means that the period from the start of one key to its end will overlap with the next period, which has the same start date but a longer validity period. The depreciation percentage rates in the individual levels are calculated as the difference between the specified percentage rate and the percentage rate in the previous level.

Example
The following example shows the definition of five levels, each one of which should last for a year. The depreciation percentage rates in the individual years are 60, 10, 10, 10, and 10%.

valid for	**percentage rate**
1 year	60
2 years	70
3 years	80
4 years	90
5 years	100

In addition, you can limit the levels according to specific acquisition years. This enables you, for example, to observe certain legal requirements that place time restrictions.

Caution
*You must enter a validity period in calendar years or months, **not** in fiscal years or periods. Therefore you probably cannot use the delivered calculation keys in shortened fiscal years (see*

Topic Shortened Fiscal Years).

Declining balance method of depreciation

The declining balance method of depreciation multiplies the straight line percentage rate resulting from the useful life by a given factor. Since a relatively short useful life gives a very large depreciation percentage rate, you can specify a maximum percentage rate as the upper ceiling limit. The same applies for a very long useful life. A minimum percentage rate prevents the percentage rate from sinking below a lower level.

Changeover key

Certain methods necessitate a changeover to another method for mathematical reasons in order to depreciate the asset completely within the period of use. An example of this is the declining balance method of depreciation, which never leads to a net book value of zero. Usually legal conditions enable or necessitate the changeover to another method. The changeover method dictates what criteria should be followed when performing a changeover. The changeover key contains the calculation method to be used after the changeover. All internal calculation keys can be used as changeover keys.

You can set up the following changeover methods:

- **Changeover when depreciation amount of changeover method higher**
  The changeover key runs parallel to the calculation key and is included in the depreciation calculation. Changeover takes place as soon as the depreciation amount resulting from the changeover key is greater than that of the actual calculation key.

- **Changeover when net book value percentage rate reached**
  With this method, changeover takes place as soon as the net book value falls below the specified percentage rate of the acquisition value.

- **Changeover when net book value is less than changeover amount**
  When defining areas, you can specify a changeover amount in the respective currency of the area in question. When the net book value falls below this changeover amount, changeover to another method takes place.

- **Changeover when net book value is less than straight line rate**
  The straight line depreciation rate is calculated from the useful life and serves as a comparison with the net book value. If the net book value falls below this straight line rate, changeover to another method takes place.

- **Changeover after expiration of planned useful life**
  You can likewise change over to another method when the planned useful life has expired. In particular, declining balance method of depreciation is only defined for use during the useful life. If, for example, you were to carry out post capitalization after expiration of the useful life, you would have to use a different method.

With changeover at the end of the planned useful life, the switch to a specified changeover key follows an exact period specification. With other changeover methods, the changeover takes place according to fiscal years. The changeover criteria are checked with reference to the total depreciation for the year, and the depreciation for the fiscal year is either calculated with the original key or with the new changeover key.

Finalization

The depreciation of a fixed asset is usually finalized when a net book value of zero or the end of the planned useful life has been reached. On occasion, these two things do not occur at the same time.

Sometimes, the book value has not yet reached zero when the useful life is expired, due to the calculation method used. By adjusting the finalization process beyond the end of the planned useful life, you can continue to depreciate beyond the end of the useful life. It is also possible to depreciate below zero as long as the depreciation area allows a negative net book value. Depreciation below zero can, for example, be useful for cost-accounting purposes.

With depreciation beyond the planned useful life, the depreciation percentage rate can be derived from the respective useful life. This gives a declining balance procedure instead of straight-line procedure. An asset that originally had a useful life of 10 years is depreciated in year 11 by 1/11 = 9.09 %, in year 12 by 8.33 % and in year n with 100/n %.

The depreciation close usually occurs within the fiscal year due to the fact that the depreciation start date for the asset is also within the fiscal year. Using a control function in the calculation key, you can automatically reduce the useful life so that the depreciation close always falls at the end of the year.

Other features

The calculation key offers three other ways, in addition to the control possibilities already discussed, of determining the features relevant to depreciation calculation.

- **Calculate shutdown**
  By specifying shutdown periods in the master record, you can use this indicator to suspend depreciation during shutdown periods.

- **Depreciation per asset value date**
  By means of this indicator, the system can either depreciate acquisitions from the depreciation start date or from the asset value date of the respective acquisition to the asset. In the first case, the system performs a uniform depreciation to all acquisitions to an asset. In the second case, the system depreciates each acquisition from the asset value date of the respective acquisition posting.

- **Depreciation per days**
  This indicator enables depreciation that is accurate to the day. The period control rules in the calculation key are thus deactivated. This type of depreciation is, for example, a legal requirement in France.

Period Control

Using the base value date of a transaction (acquisition or retirement), the system determines the start date or end date of depreciation calculation via period control. When setting up an asset company code, the system automatically generates upto 10 period control norms:

- Pro rata at period start date
- Pro rata up to mid-period at period start date
  For transactions up to the mid-period, the depreciation start date is dated from the beginning of the period. Transactions after the mid-period, however, are dated from the beginning of the next period.
- Pro rata at mid-period
- First year convention of a half year
- Year start date/mid-year/year-end
  For transactions on the first day of a fiscal year, the system calculates a whole year's depreciation, for transactions up to the mid-year, half a year's depreciation and for transactions after the mid-year, no depreciation.
- At the start of the year
- At mid-year
- At the end of the year (=Start date of the following year)
- At mid-quarter
- At the second quarter

When you specify the fiscal year version for the respective asset company code (*Valuation -> Asset company code -> Definition*), the system automatically generates the allocation of calendar dates to the corresponding posting periods for these rules. However, the fiscal year version must be set up with either 12 or 24 posting periods.

Example (first year convention)

To 06/30	depreciation start date/end in period 1
From 06/30 to 12/31	depreciation start date/end in period 7

You can change these rules as you want, to achieve a more flexible allocation of calendar date to period.

Half Periods

The number of posting periods in Asset Accounting generally corresponds to the number of posting periods in Financial Accounting. You can, however, double the number of depreciation periods if the number of posting periods corresponds to the number of calendar months. By setting a control indicator when defining the company code, you can specify the use of half periods. By specifying the calendar date, on which the second half of a period begins (for example the 16th of a month) you can have the depreciation calculation start and end at the middle of a period.

Variable period control

Using an indicator when defining the individual depreciation keys, you can specify that the keys do not use the period control of the assigned internal calculation keys. Instead they use period control defined in the company code and fiscal year (see topic "Other Periodic Processing").

This may be necessary, for example, when depreciating according to U.S. law, if the so-called mid-quarter convention is only to be used for acquisitions in specific company codes or fiscal years.

Cut - off Value Key

For some valuations it may be necessary to depreciate the fixed assets not to the net book value zero but only up to the cut-off value or the scrap value.There are two ways of defining a cut-off value for each depreciation area:

- By allocating a cut-off value key to the depreciation key used in the depreciation area.
- By explicitly entering a complete scrap value in the area-specific asset master data (either in the asset master record or in the asset class, depending on the maintenance level).

Cut-off value key

In Customizing, you can define cut-off value keys with any cut-off percentage rates. You can specify these cut-off percentage rates per year of acquisition or age of the fixed asset.

Furthermore, you must make the following specifications:

- Whether the depreciation should first be calculated without consideration of the cut-off value or scrap value, and whether it ends when the cut-off value is reached, or whether the scrap value should be deducted from the depreciation base value from the beginning.

  In the first case, depreciation stops before the end of the planned expected useful life. In the second case, the cut-off value is reached as a net book value at the end of the planned expected useful life.
- At which point the cut-off dates for the defined depreciation levels should start (for example, the capitalization date.)

You can allocate a cut-off value key to a depreciation key when defining the depreciation key.

Explicitly defined scrap value

When maintaining the area-specific master data, you can enter an absolute scrap value for every depreciation area. This amount is not depreciated.

This has the following effect:

- If no cut-off value key is determined in the depreciation key, the depreciation ends nevertheless when this value is reached.
- If a cut-off value key is defined, the cut-off percentage rate of the key is ignored and the specified amount is processed as a cut-off value. Depending on the cut-off value key, the amount is either subtracted from the depreciation base before the depreciation calculation start date, or the depreciation ends when the value is reached.

Depreciation Methods

The system supports the depreciation methods listed below. You can determine the depreciation method by specifying a correspondingly defined depreciation key in the depreciation area specifications of the asset master record or in the asset class. Standard keys exist in the System for the depreciation methods listed below.

Straight - line Depreciation over Total Useful Life

The asset is depreciated in equal amounts over the the specified total useful life. Post capitalization and subsequent acquisitions necessitate an increase in depreciation, by the amount which would have been necessary to fully depreciate the addition over the original useful life of the asset. This results in an increase in the length of time necessary to depreciate the asset, that is, the time period from the beginning of depreciation until the book value of zero is reached.

Calculation:
Depreciation = APC / expected useful life

Example:

APC	1000
Expected useful life	10
Depreciation = 1000 / 10 =	100

An internal calculation key (for example 1041), which determines a percentage rate from expected useful life and bases asset values on the acquisition value or replacement value, characterizes this depreciation method. Furthermore, certain calculation keys allow depreciation below book value zero after the planned life has expired.
In this case, the rate of depreciation can decrease after the planned life because you can then use the already expired useful life instead of the planned expected useful life to calculate depreciation. In the 11th year of use, you would not calculate with 10% as in the preceding 10 years but only with 1/11 = 9.0909%.

Straight - line from the Book Value over Remaining Useful Life

The book value of the fixed asset is distributed in equal amounts over the remaining life. However, unlike straight-line depreciation over the total useful life, post capitalization and subsequent acquisitions definitely do not lead to an extension of expected useful life. Post capitalization or subsequent acquisitions after the expiry of the specified expected useful life do, however, cause problems in this depreciation method. In such cases, the changeover key in the depreciation key used must provide for another method after the expiry of the expected useful life.

Calculation:
Depreciation = residual book value / remaining life

Example:

APC	1000
Expected useful life	10
Residual book value	500
Remaining life	5
Depreciation = 500 / 5 =	100

Calculation key 1020 is a good example of this depreciation method. Calculation key 1020 uses method "D" and the "remaining useful life" indicator and, therefore, calculates a rate of depreciation from the respective remaining life. Furthermore, the asset value indicator "24" ensures that the respective residual book value is to be depreciated. The net book value and the remaining life are proportionally linked. The system thus uses straight-line method of depreciation. In the event of incoming transactions after expiry of the expected useful life, the calculation key switches to calculation key 0010 after the planned end. As a result, each of these transactions is fully depreciated.

Declining - balance Method of Depreciation

For the declining balance method of depreciation, the fixed asset is depreciated by a progressively falling rate. A constant percentage rate is calculated from the expected useful life and a given multiplication factor. This is multiplied with the falling net book value of the fixed asset. For mathematical reasons, the net book value will never reach zero using this method. You change over to straight-line or complete depreciation under these conditions

:- declining balance depreciation < straight-line depreciation
- remaining balance < x percent of acquisition value
- remaining balance < fixed amount
- remaining balance < straight-line depreciation

The changeover method is determined in the internal calculation key.

Calculation:
Depreciation = net book value * percentage rate from expected useful life and factor

Example:

APC	1000
Exp. useful life	10
Net book value	700
Multiplic. factor	3

Depreciation = 700 * (100% / 10 * 3) = 210

Declining Multi - phase Depreciation

The specification of the rate of depreciation and the validity period allows you to determine a typical course of depreciation that changes at different levels. In this case, the validity period can have, among other things, either the capitalization date or the depreciation start date as a base. The change between levels does not have to be the start date or the end of a fiscal year. You can also change to another rate of depreciation during the fiscal year.

Calculation:
Depreciation = Acquisition value * percentage rate of the level

Example:

APC	1000
Expected useful life	50
Percentage rate 1-8 Year	5.00%
Percentage rate 9-14 Year	2.50%
Percentage rate 15-50 Year	1.25%

Depreciation level 1 = 1000 * 5.00% = 50
Depreciation level 2 = 1000 * 2.50% = 25
Depreciation level 3 = 1000 * 1.25% = 12.5

Declining - balance Method According to Japanese Requirements

Using this method, the system determines the depreciation percentage rate from the ratio between the relative scrap/cut-off value and the acquisition value. The system then determines the n-th root of this ratio (n = useful life). The depreciation percentage rate is the complement of the percentage that was thus determined. This depreciation percentage rate is in effect for the entire useful life of the asset.

Calculation:
Depreciation = Remaining book value * depreciation percentage rate

Example:

APC	10000
Scrap value	10%
Useful life	10 years

depreciation percentage rate = 1 - ((1000/10000) ** 1/10) = 20 %

Sum - of - the - years - digits Method of Depreciation

For each year of the expected useful life, the system notes the respective remaining useful life and totals the figures from each year. In each fiscal year, the respective remaining life is divided by this total and thus the depreciation percentage rate for that fiscal year is calculated. This method leads to depreciation amounts that reduce progressively by the same amount each period.Since the remaining useful life is no longer defined after the end of the planned useful life, this depreciation method does not allow for depreciation after the end of the planned life. However, you can change to another method after the expected useful life originally determined.

Acquisitions after the depreciation start year or post capitalization will necessarily lead to a positive net book value at the end of planned life. For this reason, such transactions are not allowed when using the sum-of-the-years-digits method of depreciation. Here, subsequent acquisitions can only be set up as sub-numbers to the fixed asset.

Calculation:
Depreciation = APC * remaining useful life (current period) / total of remaining useful life (over entire useful life)

Example:

APC	1000
Expected useful life	4
Total remain. useful life	10 (= 4 + 3 +2 +1)

Depreciation 1st year = 1000 * 4 / 10 = 400
Depreciation 2nd year = 1000 * 3 / 10 = 300
Depreciation 3rd year = 1000 * 2 / 10 = 200
Depreciation 4th year = 1000 * 1 / 10 = 100

Mean Value Method

By linking two depreciation areas, the mean value of two depreciation methods can be managed in a derived area. To do this, the derived area must be identified as a mean value area. In place of the arithmetic mean, the areas can also be linked by any formula at all.Linking formula for the mean value:

Calculation
Depreciation = (depreciation area 1) / 2 + (depreciation area 2) / 2

Example:

Depreciation area 1	300
Depreciation area 2	100
Formula:	(Depr. 1) / 2 + (Depr. 2) / 2

Depreciation = 300 / 2 + 100 / 2 = 200

Depreciation for Multiple - shift Operation and Closure

Increased depreciation is often calculated for assets that are used in multiple shifts. Often no depreciation is calculated for assets that are shut down. The following fields are provided for these instances in the asset master record

- multiple-shift factore (time-dependent)
- variable portion of depreciation (dependent on depreciation area)
- shutdown indicator (time-dependent)

Multiple-shift operation

You can calculate increased depreciation due to multiple-shift operation for all types of depreciation except unit-of-production (unit-of-production depreciation is by definition 100% variable). You take this increased wear and tear on the asset into account using the following method:

- Enter a multiple-shift factor in the time-dependent data in the asset master record. This shift factor is multiplied by the variable portion of ordinary depreciation.
- You can specify the variable depreciation portion as a percentage rate in the depreciation area. You can enter a different percentage in each depreciation area. Depending on the maintenance level you have defined, you make this entry in either the asset class or the asset master record.

The total depreciation amount is then calculated as follows:

Depreciation amount = fixed depreciation + (variable depreciation * shift factor)

Example
The following example shows the depreciation amounts for an asset with 1000 annual depreciation, and 60% variable portion:

shift factor 0: 400 + (0 * 60 * 1000/100) = 400 (only fixed portion)

shift factor 1: 400 + (1 * 60 * 1000/100) = 1000

shift factor 2: 400 + (2 * 60 * 1000/100) = 1600

shift factor 3: 400 + (3 * 60 * 1000/100) = 2200

A special problem arises when you use depreciation keys that calculate the periodic depreciation amount by dividing the remaining book value by the remaining useful life. If you use such a depreciation key, depreciation is not linear over the entire useful life. Therefore, the system reduces the useful life internally to correspond to the increased depreciation, so that the depreciation is linear in this situation as well.

Multpe-shift operation for assets with declining-balance depreciation

For assets using declining-balance depreciation, the system does not increase depreciation amounts during the declining-balance phase of depreciation, since the corresponding calculation keys are already defined with a multiplication factor (greater than 1). However, the system nonetheless reduces the useful life of the asset. The result of this reduction in the useful life is that the system changes over to straight-line depreciation sooner. The asset then reaches the book value zero that much sooner in the remaining useful life.

Shutdown

If an asset is shut down for a given period of time, you can suspend the depreciaton as follows:

- Define the appropriate time interval in the time-dependent data for the asset.
- Set the shutdown indicator in the asset master record for this interval.

- Use a depreciation key in the affected depreciation areas that has an internal calculation key defined to allow for shutdowns.

The system does not calculate depreciation during the time period of the shutdown. The useful life of the asset increases by this length of time. When you remove the shutdown indicator, the system automatically resumes the calculation of depreciation.

Unit - of - production Depreciation

For certain fixed assets, it may make sense to use unit-of-production depreciation. This depreciation method allows you to take into account fluctuations in activity for the depreciation calculation by linking the amount of the period depreciation directly to the output quantity.For forecasting the unit-of-production depreciation you must adapt a number of units dependent depreciation key to your requirements (see the chap. Other Periodic Processing):

- For the calculation of the unit-of-production depreciation, enter the probable total output quantity of the fixed asset.
- Determine the probable output quantity for every depreciation period in the outstanding fiscal years.

The calculation of the period depreciation is dependent on the internal calculation key of the depreciation key used. Two versions are possible in this case:

- Depreciation of acquisition value via the total output
- Depreciation of net book value via the remaining output

Calculation:

Depreciation = acquisition value (net book value) / total output (remaining output) * period output

Example:

APC	10000
Total output:	10000
Period output:	100

Depreciation = 10000 / 10000 * 100 = 100

As with other depreciation methods, the actual posting of the unit-of-production depreciation is carried out by the periodic depreciation posting run (see Topic Posting Depreciation).

Examples U.S.A.

Let us illustrate the depreciation coding with examples of the common depreciation methods currently being used in the USA. The depreciation keys mentioned below will be supplied in the plan of depreciation 0US.MACRS

For MACRS, the following Depreciation Keys are defined in accordance with the Internal Revenue Service depreciation rate tables:

- **M200** 3, 5, 7, 10 years property
- **M150** 15, 20 years property
- **MSTL** 27.5 and 31.5 years property

ACRS

For ACRS, the following depreciation keys are defined in accordance with the Internal Revenue Service depreciation rate tables:

- **A0xx** defines the ACRS-depreciation percentages for 3, 5 and 10 years property.
- **A15x** defines the ACRS-depreciation percentages for 15 years property. Depending on the month placed in service A15A (Jan.) through A15L (Dec.) should be used.
- **A18x** defines the ACRS-depreciation percentages for 18 years property. A18A (Jan.) through A18L (Dec.) should be used for assets placed in service before June 23rd 1984. A18M (Jan.) through A18X (Dec.) should be used for assets placed in service after June 22nd 1984.
- **A19x** defines the ACRS-depreciation percentages for 19 years property. Depending on the month placed in service A19A (Jan.) through A19L (Dec.) should be used.

Complete write-off of LVA in year of acquisition.

The depreciation key is especially for the complete write-off of low-value assets in the relative year of acquisition. It uses the calculation key 0030 which, in conjunction with the recommended useful life of 1 period for LVAs, leads to an immediate complete write-off in the acquisition period. You cannot post additional acquisitions in subsequent years to an asset master record. LVAs can then be traced exactly according to acquisition year. Retirements in the acquisition year are always evaluated with complete write-off.

Composition of Asset Values

The asset values in the system are displayed according to the gross book value method. This means that depreciation is not deducted from the acquisition cost. Over the entire life of the asset, the system updates the acquisition and production costs separately from the accumulated depreciation. Only changes to the makeup of the asset result in the updating of the acquisition cost. For partial retirements to an asset, the system automatically determines depreciation (value adjustments) up to the point of retirement, and this is retired along with the partial asset.Value components

Different types of depreciation and special valuations of assets (for example, interest) result in an asset having various value components. These are calculated in part automatically, and in part they must be entered manually:

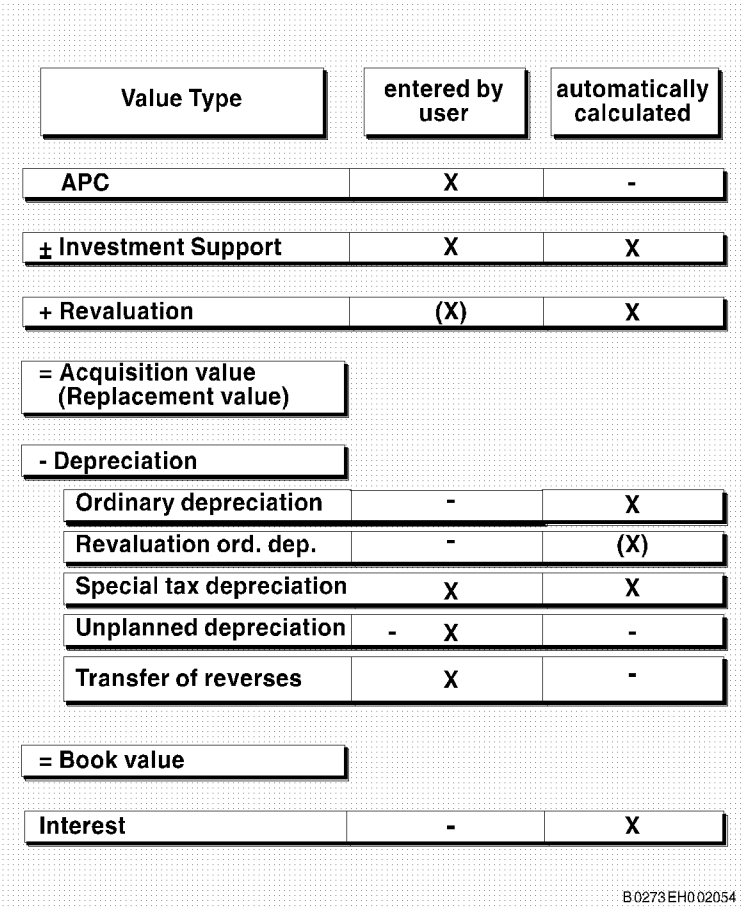


Fig. Composition of asset values

Net book value

The system determines the net book value at the end of a year in the following manner:

Net book value at the beginning of the year
+/- Transactions changing APC (for retirements and transfers corrected for proportional value adjustments)
\+ Write-ups for the year
\- Planned depreciation for the year

Transactions that change acquisition and production costs are:

- Acquisitions, retirements, transfers
- Investment support measures
- Transferred reserves
- Revaluation

Special Valuations of Fixed Assets

It makes sense to valuate assets differently for special calculation purposes. The special valuation options of the system are displayed in the following.

Interest

Replacement Values (general)

Indexed Replacement Values

Manual Appreciation

Net Worth Tax

Investment Support Measures

Passive Treatment (Investment Support)

Active Treatment (Investment Support)

Default and Check Control - Asset Master Record Maintenance

Reports and Bulk Posting

Insurance Values

Valuation Methods for Leased Assets

Undisclosed Reserves

Interest

In addition to the four depreciation and/or valuation types already mentioned

- ordinary depreciation,
- special depreciation,
- unplanned depreciation, and
- transfer of reserves,

you can also calculate for each depreciation area an interest valuation on the fixed capital tied up in an asset. Interest calculation is controlled in the same way as depreciation calculation by any internal calculation key. This calculation key is itself part of the depreciation key. In addition to the allocation base (for example, acquisition value or replacement value), you can also determine the interest rate via the internal calculation key. Interest calculation is carried out either until book value zero is reached, up to the end of expected useful life, or for an unlimited period. You can post the interest periodically and with reference to a cost center together with depreciation when you perform a posting run.

Calculating interest

If you would like the system to calculate interest for you in a depreciation area, you must note the following:

- When defining the depreciation area, specify that interest should be managed.
- Determine depreciation posting in this company code and in this depreciation area so that interest should be posted.
- Use a depreciation key that has an internal calculation key allocated to it for calculating interest (or define such a key).

Replacement Values (general)

Along with the historical acquisition and production costs of an asset, the R/3 AM System enables you to work with the replacement value of the asset, which can provide a more current basis for valuation. The replacement value of an asset results in general from two influences:

- On the one hand, the replacement value of an asset changes due to inflation.
- On the other hand, technical progress leads to a changed price for an appropriate replacement acquisition (for example, lower prices for personal computers).

When determining replacement value, the system distinguishes between possiblities:

- **Indexed Replacement Values**
  Using index series, you can take periodic changes in value into account automatically. When depreciation is posted, this takes place according to the specific asset class.

- **Manual Revaluatiuon**
  This method allows you to reflect tax specifications regarding inflation. Over larger intervals (several years), you can use a one-time revaluation of the asset to offset the effects of inflation.

Indexed Replacement Values

In certain countries, where the rate of inflation is very high, depreciation based on replacement value is allowed. In addition, it makes sense for business administrative reasons to take price changes of investment goods into account for cost accounting purposes. For example, a company concerned with inflation accounting can use this method to take actual reduction in the value of assets into account in its pricing policy. Therefore, the cost accounting depreciation area is set up in the standard system so that you can manage replacement values there. Current depreciation based on the replacement value is then periodically transferred to Cost Accounting when you carry out the depreciation posting run.

However, it is also possible to define the depreciation area (Area 01), the values from which are posted to Financial Accounting, with replacement values. In this way, the depreciation posting program automatically posts depreciation values, as well as changes to the asset balance due to revaluation, to Financial Accounting. If you set the indicator in the depreciation area, the system will also calculate any resulting addition to (or reduction of) accumulated depreciation from previous years (backlog depreciation).

You can also use index values for determining insurable values. In many instances, the premium for an insurance contract is based on the indexed acquisition value of the asset. (see the chapter Insurance Values).

Index series

The system determines replacement value of an asset using the index series that you defined in Customizing and specified in the individual master records. The calculation of the current replacement value can take place in two ways.

- Determination from the APC in an historical acquisition year (historical calculation)
- Determination from the replacement value of the previous year

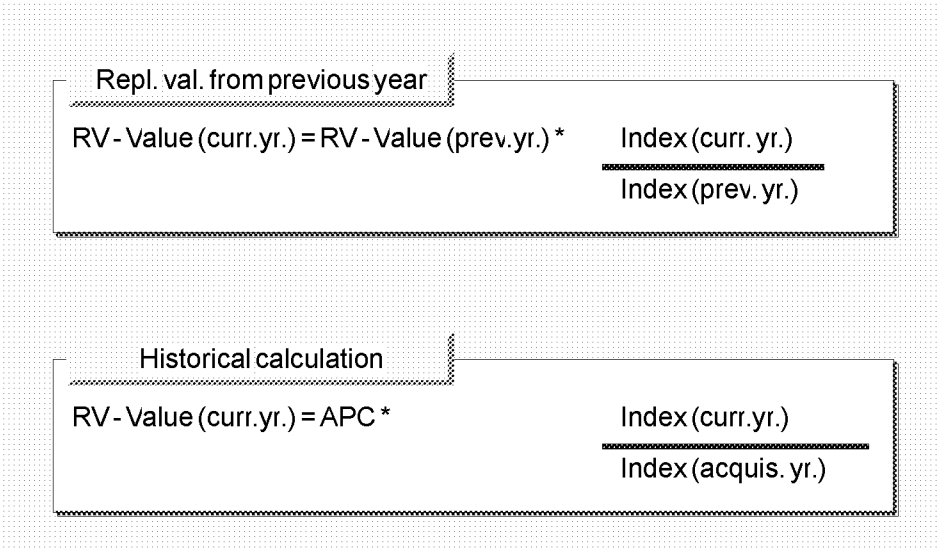

Repl. val. from previous year
RV - Value (curr.yr.) = RV - Value (prev.yr.) *
Index (curr. yr.)
Index (prev. yr.)
Historical calculation
RV - Value (curr.yr.) = APC *
Index (curr.yr.)
Index (acquis. yr.)

Fig. Value determination with index series

Depending on the time-frame of your index figures, the index series can be divided into two types: age-dependent and year-dependent.

- Age-dependent index figures are based on the n-th year that an asset belongs to the company.

Age-dependent figures represent a yearly rate of change from the point in time when the asset was acquired. The year 1 has the index figure 100.

- Year-dependent index figures are based on a specific fiscal year or calendar year, and represent a rate of change from a base fiscal year. This base year has the index figure 100.

In principle, you can use one index to reflect inflation and technical progress, or you can set up two separate index series for these situations. For example, you can specify a year(inflation)-dependent and an age(progress)-dependent index for determining replacement value. The replacement value is then determined as the average of the two index values.

Since the system manages revaluation separately from the original acquisition value, these are also analyzed separately in reporting. Note that the system only automatically revaluates the asset values that existed at the start of the fiscal year. The system does not take transactions in the current fiscal year into account.

Defining the index series

When defining an index series in Customizing, first select an appropriate index class. The following specifications are made in the index class:

- the indexing cycle (for indexing during the fiscal year, you can specify the number of periods).
- whether the index series is year or age dependent
- whether the replacement value should be calculated historically.
- In a future release you will be able to specify whether the index figures relate to the fiscal year or the calendar year when a you are using a non-calendar fiscal year. At the present time, index figures relate only to the fiscal year.

When creating an index series, therefore, only enter index figures according to age or year. Also enter the percentage rate for the increase of asset values to be used for simulation of future fiscal years.

Calculation with replacement values

If you want to use replacement values as the basis for calculation within a depreciation area, you must be aware of the following:

- When defining the depreciation area in question, you should allow for revaluation
  - of acquisition and production costs
  - of accumulated depreciation from the past (backlog depreciation)

  or use the standard depreciation area for cost accounting values (20).
- The depreciation key for this depreciation area should have an internal calculation key that uses the replacement value as the base value.
- Enter the key of an index series for the depreciation area in the asset master record or in the asset class (you can specify a second index series in the detail screen of the particular depreciation area).
- Maintain your index series by periodically entering current index figures.

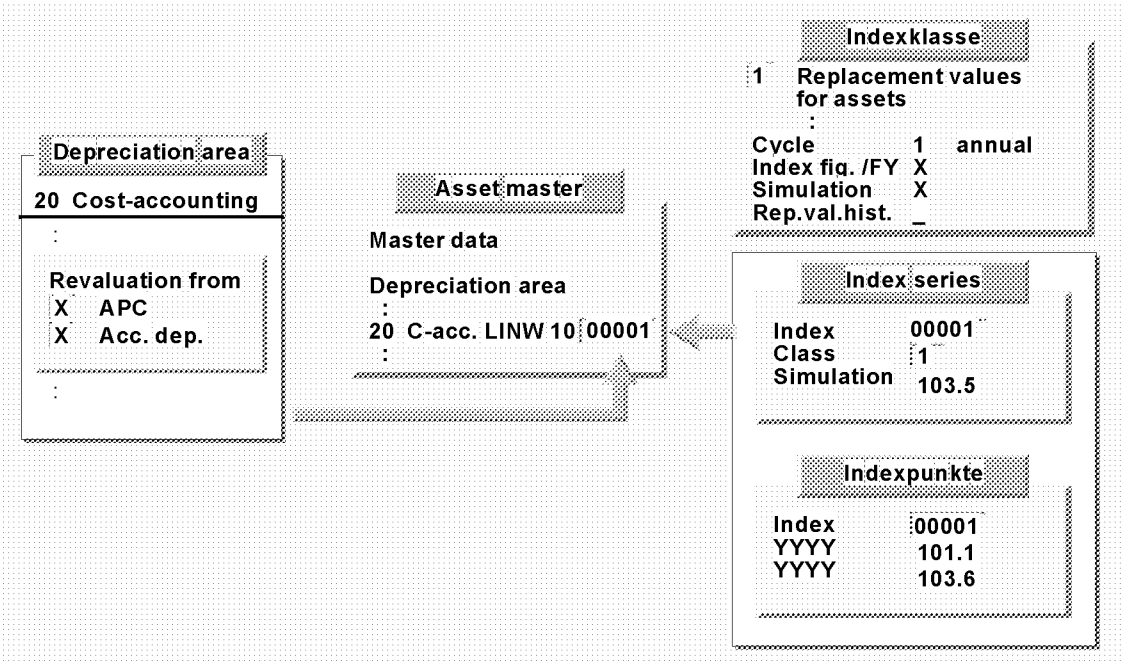


Fig. Calculation with replacement values

Manual Revaluation

Manual revaluation is generally based on legal tax requirements and therefore affects the entire fixed assets of a company in a given country. In principle, you can post revaluation in every depreciation area. In accordance with the legal requirements in many countries, however, you must be able to separately identify such changes in value. In this case, you must use a separate depreciation area for each revaluation.

Definition of revaluation

You can define the revaluation (time limitations, base depreciation area, and so on) in Asset Customizing. For each revaluation, you can define the depreciation area in which it should be carried out. You can also define additional (already existing) depreciation areas for revaluation. Since the rules for revaluation vary widely according to country and according to time requirements, the system does not provide standard revaluation rules. However, there is a corresponding customer modification project (ARVL0001). This modification project enables you to easily install your own revaluation rules in the system (see the topic Individual User Modifications).

Collective planning of revaluation

If you wish to carry out collective planning of revaluation, you must follow these steps:

- Define the permitted revaluation and the corresponding depreciation areas in Customizing.
- Add the necessary depreciation areas for the affected asset classes, and update the depreciation terms.
- Adapt the customer modification project ARVL0001 to your specific requirements.
- Using the Report *RAAUFW01* and the modified function module, create a batch input session for posting the desired revaluation. The report also sets up the required depreciation areas for each asset according to the definition in Customizing.
- Process the batch input session. The session plans the revaluation for each fixed asset in the corresponding depreciation areas.

The system does not create FI documents when the revaluation is planned. Documents are not created until the depreciation area is posted to the General Ledger. Therefore, make sure that the depreciation and the asset values from the revaluation depreciation area are posted using periodic posting to Financial Accounting (see the chapters Posting Depreciation Other Periodic Processing).

Manual planning

If you choose to plan revaluation manually, the Report *RAAUFW01* can still be used to create only the depreciation areas required for the individual assets. If you choose, the report will not create a posting session. For planning, you should use the transaction type *Rxx* (xx = key of the revaluation). The system automatically creates this transaction type when you define the revaluation.

If you want to post the revaluation as gross, that is, with the revaluation of historical depreciation (backlog calculation), you must use transaction type 800. Transaction type 800 is defined in the standard system so that it posts to all depreciation areas that allow for revaluation and backlog calculation in their Customizing definitions. If you want to limit the posting of gross revaluation only to specific depreciation areas, you have to change the Customizing definition of transaction type 800 accordingly.

In this instance also, FI documents are not created until the periodic posting of the depreciation area to Financial Accounting is carried out.

Caution

Posting of gross revaluation with the help of Report RAAUFW01 is currently not supported by the system.

Net Worth Tax

The net worth tax requirements in many countries require a separate valuation of the assets. You have the option of either managing a separate depreciation area for the net worth tax values or manually entering the property value in the master record.

Separate depreciation area

If the property values are to be depreciated, it makes sense to set up an independent depreciation area for the net worth tax valuation and to mark this area as the area relevant for the valuation of net assets when maintaining the asset company codes.

The values in this depreciation area are then available for special evaluation purposes, such as the creation of a property list. The structure of this list is determined by the property classification key, which must be specified in the master record.

If net worth tax in your country is based on usual tax valuation, then it is not necessary to create a separate depreciation area. The values from the tax depreciation area can then be used for evaluation purposes.

Manual property value

If the property value is not to be depreciated (for example, assessed value), you can store a manual property value in the master record. You must then set the indicator *Manual property value*, however. Net worth tax evaluation then refers to this value even if a net worth tax area is managed.

There is a special standard report available for displaying asset values in relation to net worth tax *(Reporting).*

Investment Support Measures

In some countries the state provides grants on approved investments under certain circumstances. These grants normally have to be identified separately from the actual acquisition and production costs of the asset. In order to carry out this requirement, the system offers the functions described below.

Definition of the support measure

An investment support measure is identified in the system by an investment key. You define investment keys in Asset Customizing. You also determine in Asset Customizing whether the investment support measure should be handled as a value adjustment on the liabilities side, or as a reduction of acquisition and production costs. You make this determination when entering the depreciation areas, in which the support measure should be carried out.

An investment measure is defined by the following entries:

- validity period
- maximum percentage rate (in regard to the acquisition and production costs) and/or a maximum amount
- required period of retention
- depreciation areas, in which the measure is managed (on the assets side/liabilities side)

Additional Customizing specifications:

- the account assignment for all business transactions relating to the support measure
- plausibility check for the allocation of a support measure to an asset

Indicating the asset

You indicate the assets that are eligible for subsidies by specifying the investment key in the asset master record. Entering this key also activates the required depreciation area for the asset. You can manage an indefinite number of support measures for each asset. However, if you manage more than one support measure for an asset, each one must be managed in a separate depreciation area. This is necessary, for example, for a partial retirement, in order to exactly identify the part of the retirement amount that is derived from the subsidy amount.

You must enter the depreciation areas in the respective asset class for all investment support measures that are possible. When you enter the investment key in the asset master record, the system creates the needed depreciation area for the individual asset. The system creates only the depreciation areas needed for the investment support measures that pertain to that particular asset.

Entering an investment key in the asset master record makes it possible

- to create a list of assets that may be eligible for investment support (as a supplement to the assistance application), and, if desired, to carry out the corresponding posting
- to carry out plausibility tests when claiming the investment
- to identify problems with the required period of retention when the asset is retired or transferred
- to automatically post the necessary transactions in regard to the investment support when the asset is retired

Claiming the investment support

The system generates transaction types for posting investment support when you define the support measure. These transaction types are called (xx = investment support key):

- Ixx for implementation
- Jxx for an extraordinary write-off of the investment support (no repayment obligation), only when

the support measure is managed on the liabilities side.

You can use the ordinary transaction types for asset retirements for repayment of the investment support amount. In the event of a fixed asset being retired in the support year, you must reverse the subsidy amount beforehand with transaction type "Ixx".

Bulk posting

You can, of course, manually post the implementation of investment support measures for each individual asset. However, you can also use a report available in the Asset Accounting report menu to create

- a list of assets eligible for investment support (supplement to the application for investment support)
- a batch input session for implementing the investment support.

(See the topic Reports and Bulk Posting) By processing the batch input session, you create the corresponding postings in Financial Accounting.

Catch-up procedure

You may have assets that were acquired in previous fiscal years that would have been eligible for investment support. By using an indicator in the investment key, you can specify that the investment support be "caught up" for those assets. You can use the report that is for the mass posting of the implementation of investment support measures. This report will automatically "catch up" the investment support for those assets that have the proper indicator set in the investment key.

I

Passive Treatment

When investment support is managed on the liablities side, it is possible to depreciate the full acquisition value of a fixed asset over the expected useful life. The investment support amount granted, which is posted as a special reserve on the liabilities side of the balance sheet, is also depreciated. This treatment on the liabilities side requires at least one separate depreciation area in which the values are managed and posted to Financial Accounting. If you manage more than one investment support measure for an asset at the same time, you need a separate depreciation area for each support measure.

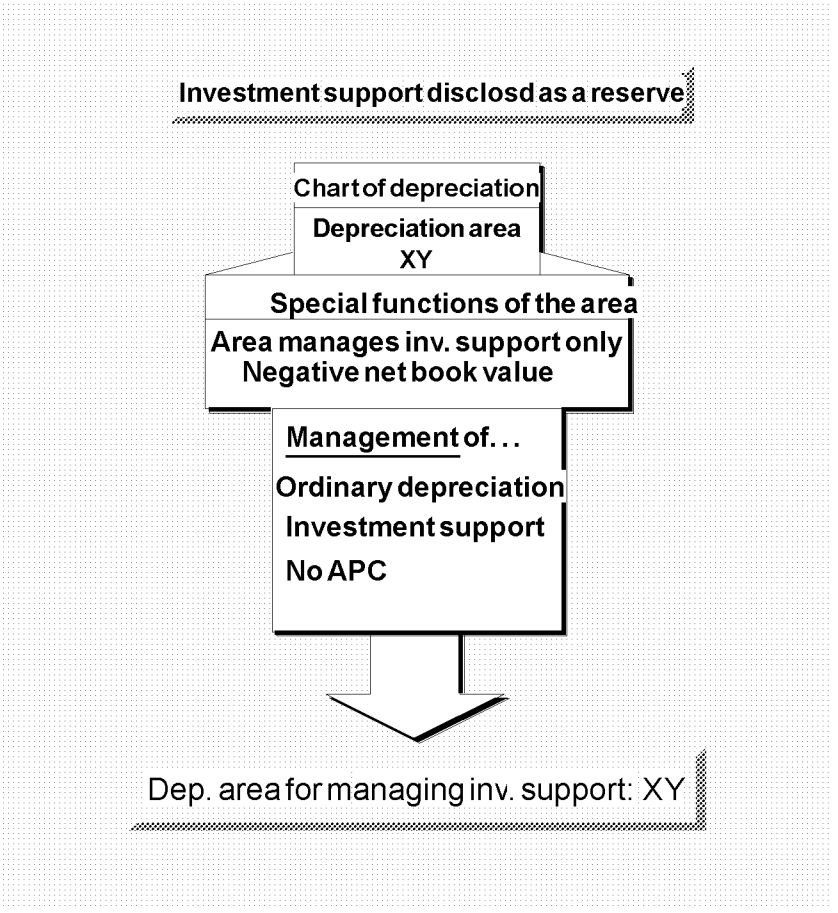


Fig. Area for Passive Investment Support Management

The support amount can be amortized using all available calculation methods (depreciation keys). As long as you specify that the investment support depreciation area takes over its depreciation terms from the book depreciation area, then you can ensure that the support measure is amortized according to permitted book depreciation terms.

Necessary accounts

Treatment on the liabilities side requires the following G/L accounts:

- Implementation/use of support
  - special reserves account
  - allocation clearing
- Revenue accounts

- ordinary amortization (periodic depreciation)
- amortization due to premature asset retirement
- extraordinary amortization (manual depreciation), with no repayment obligation

o Repayment accounts
- clearing: the full support amount is provided here in preparation for a refund
- expense: for the part of the support amount already amortized

Example

The accounts are explained in more detail below. The following business transactions are used to demonstrate the accounts:

1. Retirement within the required retention period without force majeure (with the repayment obligation)
   (1) investment support 12% (1,200.00)
   (2) planned amortization of support (120.00)
   (3) premature amortization with repayment

Special Reserves	
(2) 120	(1) 1200
(3) 1200	(3) 120

Clearing Allocation	
(1) 1200	

Planned Amortiz.	
	(2) 120

Expense Repayment	
(3) 120	

Clearing Repayment	
	(3) 1200

2. Retirement within the retention period due to force majeure (with no repayment obligation)
   (1) investment support 12% (1,200.00)
   (2) planned amortization of support (120.00)
   (3) premature amortization without repayment

Special Reserves	
(2) 120	(1) 1200
(3) 1080	

Clearing Allocation	
(1) 1200	

Flanned Amortiz.	
	(2) 120

Amotiz. due to Fet.	
	(3) 1080

3. Extraordinary amortization
   (1) investment support 12% (1,200.00)
   (2) planned amortization of support (120.00)
   (3) extraordinary amortization (600.00)

Special Reserves	
(2) 120	(1) 1200
(3) 600	

Clearing Allocation	
(1) 1200	

Flanned Amotiz.	
	(2) 120

Lnplanned Amortiz.	
	(3) 600

Retirement after the required retention period: the posting is the same as for a retirement within the retention period due to force majeure. When the retirement includes several sub-numbers, the required period of retention is interpreted separately and posted separately for each sub-number.

Active Treatment

If an investment support is treated as a reduction on the assets side, the acquisition costs are reduced by the support amount. The system uses the reduced acquisition costs as the depreciation base.

If you are managing only one investment support measure for each asset, you do not need a separate depreciation area. The investment support is then handled in the automatic entry depreciation area (usually the book depreciation area). This area automatically posts directly to Financial Accounting. You need a clearing account in Financial Accounting for the allocation of investment support.

Depreciation areas for management on the liabilities side

If you manage more than one investment support measure for a fixed asset and you want each measure to be posted separately in Financial Accounting, you need special depreciation areas. You must manage the additional investment support measures in separate depreciation areas and post the values from these areas into Financial Accounting. You must specify the same depreciation terms for these areas as exist in the automatic entry area (depreciation area 01).

Postings

The following transactions are technically supported:

- Implementation of support
- Termination of support in connection with acquisition value

The system cannot offer the same automatic assistance for certain transactions when this method is used, as compared to using the method of posting investment support on the liabilities side. Automatic support from the system is not available for retirements during the required period of retention, or for extraordinary write-off of the investment support. The system cannot offer assistance because, using the current method, the investment subsidy directly reduces the acquisition and production costs of the asset, and depreciation is based on this reduced amount.

Default and Check Control - Asset Master Record Maintenance

From a legal standpoint, investment support is often issued with functional or regional restrictions. Within the organizational structure of Asset Accounting, the cost center constitutes the functional restriction whereas the region corresponds roughly to the plant.

The system offers default values and checks to assist you in making these limitations while you are maintaining the asset master record. In order to do this, you specify rules for every investment support measure in Asset Customizing. The system then checks against these rules when you specify an investment support measure in the asset master record.

These rules are made up of organizational units (for example, plant) objects (for example, asset class). You can limit the validity of the investment support measure according to these units or objects.

Limiting objects

You can limit the validity of an investment support measure to the following objects/organizational units:

- Company code
- Plant
- Cost center
- Asset class

Plausibility check

When setting up support measures in a master record, the system runs a plausibility check with regard to these objects. A prerequisite, however, is that you have defined the support measures with a check indicator. In addition, you can also specify that the investment key appears in the master record maintenance as a default value.

You can make generic entries for plant and cost center, that is to say, a generic interpretation of the terms is possible (for example, 1+++++++ means: All cost centers/plants beginning with 1).

Reports and Bulk Posting

Generally, for year-end closing you need a report list displaying the fixed assets that are eligible for investment support. You use Report RAINZU01 to create this list (Menu: *Reporting*).

List of eligible assets (supplement to subsidy application)

The report determines the investment support for a fiscal year for assets that have at least one support measure specified in their asset master record. The amount of investment support is determined using the transactions for the year. For investment measures that make use of the "catch up" method, the cumulative values from previous fiscal years are also included. The report determines the value based on the maximum percentage allowed in the Customizing definition of the investment support measure. If you have already posted investment support amounts manually, the report determines the difference between the maximum amount possible and the amount already posted.

Bulk posting

At your request, the report will create a posting session for the implementation of the investment support measure. Processing this posting session creates the following postings in the General Ledger:

- Clearing account to Asset account (posting on the assets side)
- Clearing account to Special reserves account (posting on the liabilities side)

Insurance Values

The system enables you to manage insurance master data and insurance values for fixed assets. The current insurable values can be stored in the asset master record, or in a separate depreciation area. The insurable values are based on the acquisition and production costs of the assets (APC), or on a manually entered value.

The system offers three methods of calculating the insurable value:

- **Value as new insurance**
  For a value as new insurance, the APC or the indexed APC are used for the calculation of insurable value. By indexing you can account for price rate increases when determining the insurable value.

  For example, the current insurable value for fire insurance for buildings is based on index series that are published by the insurance carrier.

- **Current market value insurance**
  With current market value insurance, the APC, reduced by depreciation (that is, the book value) determines the insurable value. You can also use indexing for the current market value insurance.

- **Manual insurance value**
  A special method is setting the insurance value manually in the master record. The insurable value is usually determined through agreement with the insurance carrier.

Insurance type

The insurance type is the most important control feature for maintaining the insurable values. For each insurance type it must be determined whether the current market value or the replacement value is to be used as insurable value. At the same time you must store the depreciation area to be used there. This is needed for the following functions:

- **Update of the base insurable value (for value as new insurance)**
  For value as new insurance, a depreciation area is needed for takeover of the base insurable value (APC or indexed APC). Here you can access an area already set up (for example, book depreciation).

- **Determining current market value (for current market value insurance)**
  Here you can also use the current book values of an existing area. In order, however, to be able to use the evaluating options of the system completely, it is recommended that you define a separate depreciation area for updating the insurable current market values.

- **Currency specifications and rounding**
  The insurable value is managed in the currency of the depreciation area of the corresponding company code. The rounding rules of the depreciation area are also used for the insurable value and the base insurable value.

Base insurable value

The base insurable value is always stored for the last closed fiscal year in the asset class. It is only needed for the value as new insurance. The system determines the base value using the appropriate posting documents for the individual asset.

Insurable value

You can display the insurable value for all fiscal years including the current fiscal year.

- **Value as new insurance**
  The insurable value is determined by the base insurable value:

  Insurable value =
  (base insurable value + (asset transaction outstanding years * 100 / index year)) * index current year / 100

  Transactions from the outstanding fiscal years consist of acquisitions, transfer postings and asset retirements.
  The average index of the increase of the base insurable value and not the index of the respective retirement year, as specified in the formula, is determined as the best approximation when asset retirements are involved:

  Index Prop = 100 * accumulated APC beginning of the year / base insurable value beginning of the year

  For transfer additions to fixed assets, where posting has already taken place, the transfer addition is also valuated with the "Index Prop" as with asset retirements. During transfer additions to a new fixed asset, the transfer addition is valuated with the index of the depreciation start year.

- **Current market value insurance**
  - For indexing in the depreciation area itself, the insurable value is equal to the book value of the fixed asset.
  - If indexing is not carried out in the depreciation area, the following possibilities exist:
    - If there is no index in the insurance master data, the insurable value is equal to the book value of the fixed asset.
    - If an index series was entered in the insurance master data, the insurable value is calculated as follows:

      Insurable value = book value * index current year / index depreciation start date

- **Manual insurable value**
  When an an insurable value has been agreed upon with an insurance company, you can refer to this value which has been manually entered in the asset master record. The situation can arise that an insurable value has been manually set at one point, but in following years it should be indexed, or is influenced by transactions affecting the asset. If these situations arise, you can specify, in addition to the manual insurance value, a maintenance year (the year in which the the change is to take place). The maintence year can be either the last closed fiscal year, or a later fiscal year. If it is the last closed fiscal year, the insurable value is determined as follows:

  Insurable value = manual insurance value * index base year / index maintence year

Maintaining insurance data

Separate field groups exist for the insurance data in the asset master record. Through a correspondingly set screen layout in the asset class, it is possible to activate or switch off insurance data for certain assets. Depending on the maintenance level specified, the fields are either supplied with default values by the respective asset class or they must be maintained directly.

- **Insurance type**
  You can define the individual insurance types in Customizing.

- **Insurance index series**
  You can manually enter an index series in the asset master record for calculating the insurable value.

- **Base insurable value (only for value as new insurance)**
  You can maintain the base insurable value directly in the master record if this facility is offered in the asset view and the field status group.

- **Manual updating only**
  If this indicator is set, the insurable value can only be updated manually. Indexing cannot take place.

- **Manual insurable value**
  Enter the insurable value, which has been agreed upon with the insurance comnpany,. If needed, also enter the maintenance year.

- **Insurance premium**
  At the present time, the insurance premium serves only informational purposes.

Valuation Methods for Leased Assets

Leased assets create special accounting requirements for the lessee. During the term of the lease, leased assets remain the property of the lessor/manufacturer. They represent, therefore, a special form of rented asset. Such assets are legally and from a tax perspective the responsibility of the lessor, and are not relevant for assessing the value of the asset portfolio of the lessee. However, in certain countries, you are nonetheless required to capitalize leased assets according to the type of financing.

The result is that there are two different methods for handling the bookkeeping for leased assets, depending on legal requirements and the conditions of the lease. You must capitalize and depreciate certain leased assets (Capital Lease). Others are handled as periodic rent expense, and flow into the the Profit and Loss statement (Operating Lease). This second type is not relevant to the fixed assets of the lessee. It is therefore sufficient to manage operating leases as statistics only in the AM System (with no active depreciation areas), or to manage them only as cost-accounting values in the corresponding depreciation areas. You can then evaluate operating leases in relation to their rent liability using a special report (see below).

Capital Lease Procedure

Leased assets can be capitalized in the R/3 AM System using the Capital Lease method or they can be treated as cost-accounting acquisitions. The system calculates the acquisition value from the present value of the future payment charges in the respective leasing agreement. To be able to determine the future burden of payment, you must maintain the following leasing conditions in the corresponding asset master master records:

- amount of lease payment
- number of payments
- method of payment (payment cycle)

In order to calculate present value, you must also enter an interest rate. The system requires that you post a leasing partner as a vendor in the asset master record at the time of the acquisition posting (opening posting).

Leasing type

You define the leasing types in Asset Customizing. The leasing type is the most important control feature for the posting of acquisitions to a leased asset. It determines the following:

- The transaction type used for the acquisition posting of a leased asset.
- Different specifications for posting to Financial Accounting (for example, document type, input tax indicator, and so on.)

Accounting treatment of leased assets

Activating or de-activating the book depreciation area (area 01, that posts automatically to FI) in the asset classes for leased assets, determines whether leased assets are to be capitalized or whether they should only be dealt with as cost-accounting acquisitions. The system also determines the accounts to be posted for leased assets using the account allocation in the applicable asset class.

- **Leased assets for cost-accounting purposes**
  If you do not want to capitalize the leased assets, you can still manage the acquisition values (present value) in cost-accounting depreciation areas. Just set the corresponding cost-accounting depreciation areas to active (automatic posting area: inactive) in the asset class of the assets in question. This ensures that no posting is made to Financial Accounting in the event of asset acquisition. You can still use periodic depreciation in the active areas for

cost-accounting purposes.

The following diagram shows the accounting treatment of non-capitalized leased assets:

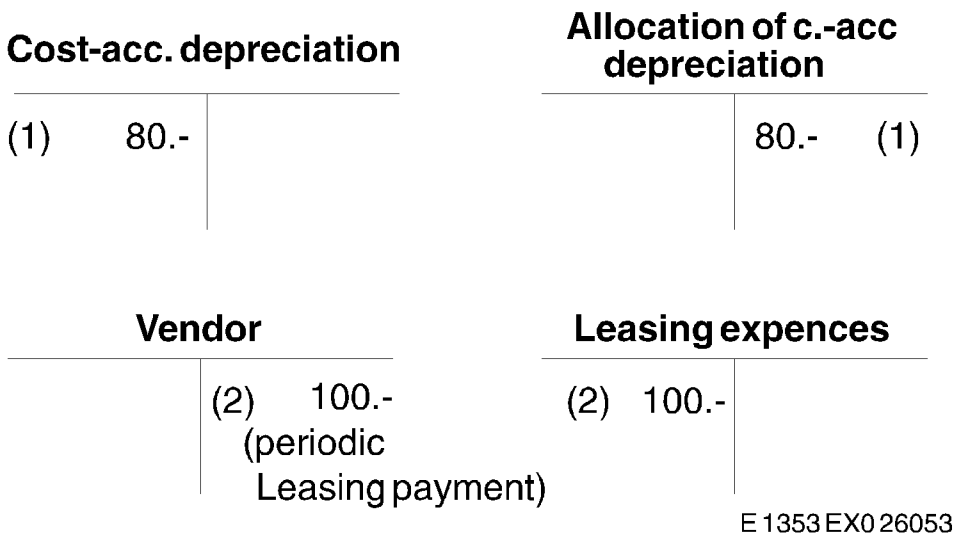


Figure Cost-accounting leased assets

- **Leased assets capitalized in the General Ledger with interest accrued (Capital Lease)**
  In some countries, leased assets can also be capitalized in the book depreciation area or the tax depreciation area. In this case, you must manage the leased asset in the automatic posting area (generally the book depreciation area). Set the automatic posting area to active in the corresponding leased asset classes. In addition, you have to store specifications for the leasing types in question for posting to FI.

  For the acquisition posting, the system capitalizes the fixed asset with the calculated present value. The corresponding payment installments are posted to the vendor as scheduled. The system determines the vendor from the leasing partner that you specified in the asset master record.

  The following diagram shows an example of the posting transactions when capitalizing a leased asset:

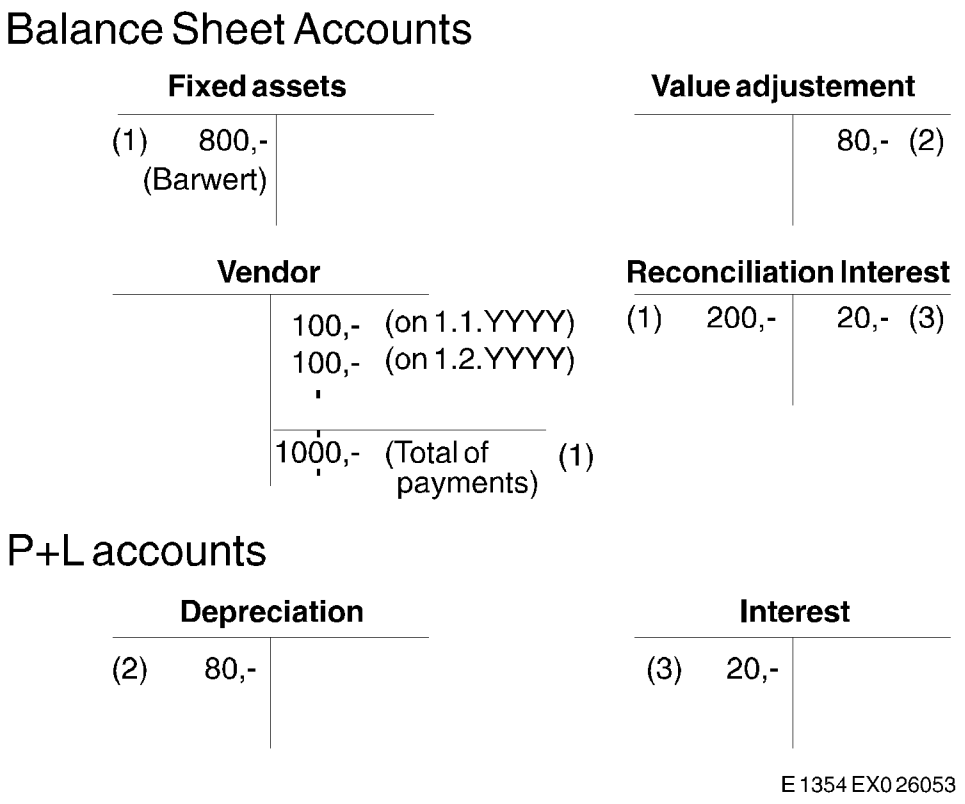


Figure Capitalizing leased assets

- **Leased assets capitalized in the General Ledger without interest accrued**
  In some countries (e.g. U.S.A.) only the present value is posted as a liability (obligation), in contrast to the above treatment. This means that the interest portion, resulting from the difference between the liability and the present value, as shown in the above case, does not have to be displayed separately. In this case, you must define the clearing account for the interest portion and the corresponding vendor account so that they are both displayed in the same item of the balance sheet.

Periodic postings

The depreciation posting program depreciates the leased asset and amortizes the interest portion. In principle you can use any depreciation key you want. The standard SAP R/3 System includes a special depreciation key, in which the depreciation amounts correspond to the present value of the periodic leasing payments (*LEAS*). Using this key, interest is determined as the difference between the leasing payments and the present value.

Calculation of present value

The present value of the leased asset is calculated on the basis of the following specifications:

g : leasing payment
i : annual interest rate
n : number of leasing payments
r : leasing cycle (for example, 3 = quarterly, 6 = semiannual)
m : number of periods in a year
q : period interest factor = 1 + (i / 100 * r / m)

If payment is made at the beginning of the period, the present value then results from the following formula:

Present value = g + g * (q**n-1 - 1) / (q**n-1 * (q - 1))

With payment at the end of the payment period, on the other hand, the present value is calculated as follows:

Present value = g * (q**n - 1) / (q**n * (q - 1))

Example

g:	100
i:	10.000 %
n:	20
r:	3
m:	12
q:	1 + (10.000 / 100 * 3 / 12) = 1.025

Present value at the beginning of the payment period:

100 + 100 * (1.025**19 - 1) / (1.025**19 * (1.025 - 1) = 1597.89

Present value at the end of the payment period:

100 * (1.025**20 - 1) / (1.025**20 * (1.025 - 1) = 1558.92

Reporting

There is a standard report in the system for determining future leasing liability (especially in regard to leased assets that are not capitalized).

The report displays for each leased asset

- the payments already made
- the payments due up to the date of the report
- the total lease payments to be made for the asset

If desired, you can create a totals list with cumulative values for each fiscal year and company code. In order for the report to work properly, you must make sure that the following leasing conditions are properly maintained in the asset master record:

- start date of the lease
- payment information (lease installments, payment cycle, number of payments)
- leasing type

Using the indicator "APC by acquisition year" (in the second request screen), you can display the theoretical acquisition value of leased assets according to acquisition year. This statistical analysis is required in some countries for financial reports. The system uses the base new value that is specified in the asset master record in the leasing information. The acquisition year is determined from the start date of the lease.

Managing leased assets in the System

If you want to manage capitalized leased assets in the system, you must bear the following in mind:

- Define leasing types in Asset Customizing with the corresponding specifications for posting

asset acquisitions.

- Create special asset classes and account allocations for your leased assets.
- The leased assets will be capitalized and depreciated in certain depreciation areas. Set these depreciation areas to active in the above-mentioned asset classes.
- Allocate a leasing type to the asset master records for leased assets.
- Maintain the information and conditions of the leasing agreement in the master records of the leased assets. Specify an interest rate for calculating the present value and determine whether the leasing payments should be carried out at the beginning of the payment period or at the end of the payment period.
- Post the acquisition of a leased asset with the display transaction for asset master data.

Undisclosed Reserves

The tax laws in many countries allow for all or a part of the undisclosed reserves that arise from the sale of assets to be transferred to replacement assets. The gains from the sale thereby reduce the depreciation base for the newly acquired assets. If such reserves are not transferred in the year in which they arise, because there are no appropriate new acquisitions, then a reserve can be created. In this way the gain from the sale of the asset does not count as profit (according to German tax law: Paragraph 6B-Reserves). This reserve must then be transferred within the following (two) years to new assets acquired during this time period. The following explanation concerns to the standard german chart of depreciation.

It is possible to post this transfer of reserves in Asset Accounting in the AM System. A more detailed explanation of the creation and transfer of reserves can be found in the topic Transfer of Reserves . If you want to manage transferred reserves for an asset, you must allow the required transaction type groups (66/67) in the asset class for this asset (under *Details*). There are two ways of managing reserves transferred to an asset in the system:

Handling on the assets side

In this case, the acquisition and production cost of the asset is reduced by the amount of the transferred reserve. Ordinary depreciation and special depreciation are then automatically calculated by the system based on the reduced acquisition and production costs.

In order for this calculation to take place, you must define the book depreciation area (01), and the tax depreciation area (02) so that they allow for the management of values for the transfer of reserves. You do not have to make this change for the area for "special depreciation" (03), since the transfer into the areas 01 and 02 must be of the same amount. Therefore any difference between the two is eliminated. For the transfer of reserves, therefore, you should use a transaction type that posts to area 01 and area 02. You must also enter the corresponding accounts for the transfer of reserves in the account allocation for the book depreciation area.

Handling on the liabilities side

In this case the transferred reserves can be represented in the balance sheet as value adjustments on the liabilities side. The calculation of depreciation in the book depreciation area is then based on the unreduced acquisition and production costs. The following possibitilities exist for this to be carried out:

- **Handling in "special depreciation" area (03)**
  If your accounts in Financial Accounting do not differentiate between reserves for special depreciation that arise from transferred reserves and those that arise from other special tax depreciation (for example, in Germany, the law providing tax credits for investment in the new states), then you can use area 02 "special depreciation based on the trade balance sheet acquisition and production costs."

  Allow for the management of values for transferred reserves in area 02. Post the reserves with a transaction type that only posts to this area. The system then automatically shows the reserves in area 03. With the depreciation posting run, the system also automatically posts the transfer and clearing of the reserves to the corresponding accounts for special reserves in Financial Accounting.

- **Using a separate depreciation area**
  If you want to use a separate account in Financial Accounting for posting transferred reserves, then you must create two new depreciation areas (04 and 05). The area 04 should have the same Customizing definition as area 02. However, area 04 is not used only for ordinary special depreciation, but also for transferred reserves.

Area 05 is a derived depreciation area. It corresonds to area 03. However, it does not calculate the difference between area 02 and area 01. Instead it calculates the difference between area 04 and area 02.

When configuring the system, you should be aware of the following:

- Copy area 04 from area 02 (tax depreciation on trade balance sheet APC) Allow for the management of special reserves in this area.
- Copy area 05 from area 03 (special reserves). Define the calculation rule for the area (+ area 04 - area 02).
- Maintain the account allocation for area 05. The system posts for this area in a similar fashion as for area 03 (see above for handling of special depreciation in area 03). It posts the transfer of reserves as a debit expense from the allocation of special reserves and a credit to the special reserve account.
- Define the transaction types for the transfer of reserves that are posted only to area 04 (book depreciation APC, special depreciation and transfer of reserves).
- Use these transaction types to post the reserves ultimately to area 04.
- Post the depreciation (the clearing of the reserves) **and** the changes to asset values from area 05 (similarly to area 03) periodically to Financial Accounting.

Fiscal Years and Periods

The following describes special aspects of fiscal years and periods in Asset Accounting.

Fiscal Years for Asset Accounting (general)

Non - calenar Fiscal Years

Shortened Fiscal Years

Fiscal Years for Asset Accounting (general)

The specification of fiscal years and periods is carried out in the SAP System in the Customizing function in Financial Accounting. You make this determination by means of the fiscal year version in the global parameters for the company code in Financial Accounting. This specification is, in general, also binding for Asset Accounting. The depreciation periods in Asset Accounting then correspond to the posting periods in Financial Accounting. In this case, it is not necessary to create a separate fiscal year version for Asset Accounting.

The fiscal year version specifies the posting periods and, at the same time, the correspondence between the calendar date and the date in the fiscal year. For this reason, you have to enter all dates (for example, the asset value date of the posting) as a calendar date, even when you are using a non-calendar fiscal year.

Period control

The period control in the applicable depreciation key determines the start and end of depreciation for asset transactions (see the topic Period Control). In the period control, you determine the relationship between the time period in which the asset is acquired and the start or end of depreciation. The posting time periods defined in this way are independent of the posting periods in Financial Accounting. The only restriction, in this case, is that the beginning of the first period and the end of the last period have to match the starting date and final date of the fiscal year in Financial Accounting.

Fiscal year versions for Asset Accounting

You can allocate a fiscal year version (period version) to the company codes in Asset Accounting that is different from the fiscal year version used in Financial Accounting (Asset Customizing: *Valuation -> Asset company code*). However, it is also absolutely necessary that the start and end date be the same in both versions.

Mid Quarter (Month) rule

This version is widely used in the United States. In this version, the periods in Financial Accounting differ from the depreciation periods. The system handles this in a special way. Providing the number of the posting periods corresponds to the number of calendar months (12), you can carry out depreciation calculation on the basis of half months and/or half periods.

To do this, proceed as follows:

- Specify the use of half periods and the mid-period date when defining the corresponding company code.
- If you defined period controls yourself, you must provide for the use of half periods in their allocation rules. For month and quarter periods, corresponding period controls are already set up in the standard version of the system.

The following diagram shows the determination of the period for the start and end of depreciation, using period control in the internal calculation key and the fiscal year version of Financial Accounting:

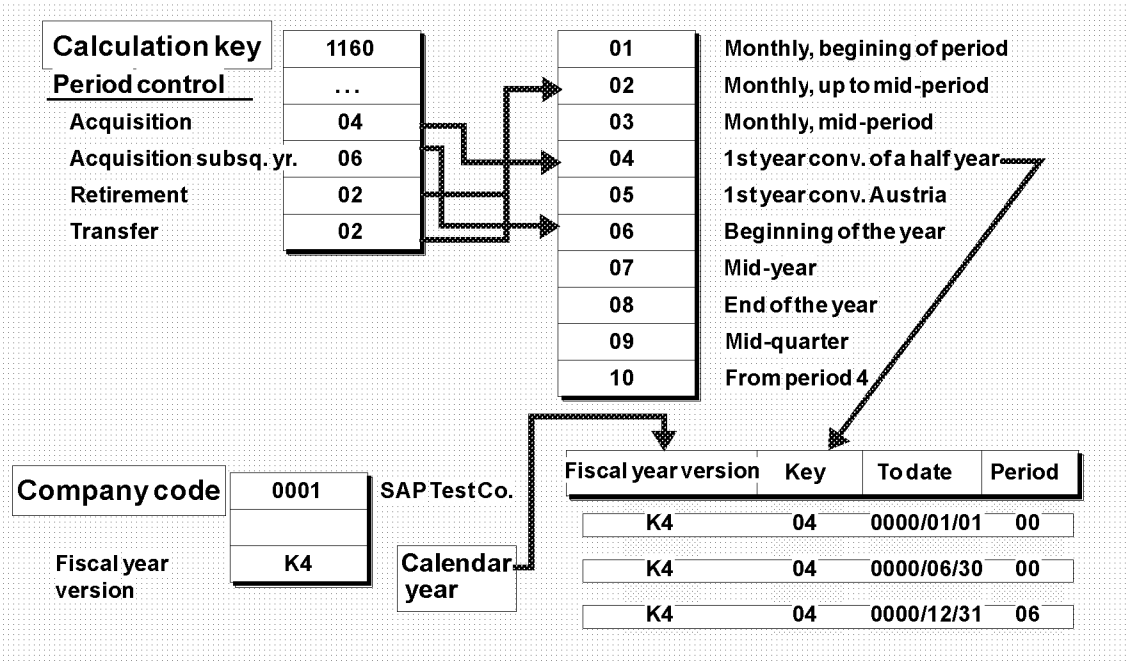


Fig. Period Control

Caution

If you specify the use of half periods when defining an asset company code, this specification also applies to other company codes that use the same fiscal year version.

Non - calenar Fiscal Years

If you choose to work with a non-calendar fiscal year, you need a fiscal year version with correspondingly defined posting periods (Customizing: *Financial Accounting -> Environment*). Allocate the global company code parameters to this fiscal year version. The system then automatically (one time only) creates the appropriate calendar assignment for the fiscal year version for the standard period control in Asset Accounting (for example, first-year convention of a half year). In order for this to occur, you must have defined the fiscal year version with 12 (or, in the case of half-periods, with 24) periods.

If the fiscal year version is year-dependent (see the topic Shortened Fiscal Years), you have to generate a new calendar assignment periodically each year. (See the topic Other Periodic Processing)

Caution
Once asset posting has been carried out, you can no longer change the fiscal year version of a company code in the current fiscal year.

Definition of posting periods (FI Customizing)

The fiscal year version contains the correlation between the calendar date and the posting periods. You must allocate a specific time period to the various posting periods. This is done by entering the last calendar date of the period. For a non-calendar fiscal year, you also have to enter a factor to indicate those periods that do not lie in the current calendar year (+1).

Example
The following table shows the allocation rule for a non-calendar fiscal year (12 posting periods, fiscal year end 06/30):

From	To	Period	Year change factor
01/01	01/31	07	0
	02/28	08	0
	03/31	09	0
	04/30	10	0
	05/31	11	0
	06/30	12	0
	07/31	01	+1
	08/31	02	+1
	09/30	03	+1
	10/31	04	+1
	11/30	05	+1
	12/31	06	+1

Non-calendar fiscal month

If you also work with non-calendar fiscal months, the last posting period in the calendar year requires special handling. For this period, you have to make an additional entry for 12/31. This means that this period requires two calendar allocations:

- a normal allocation for the period up to December 31

- an allocation with a shift for the period after January 1

Shortened Fiscal Years

A shortened fiscal year results when you change from a normal fiscal year to a non-calendar fiscal year. In order for the calculation of depreciation to be correct in the shortened fiscal year, the shortened year must begin with the Period 1 and be defined with correspondingly fewer posting periods. Therefore, when you change the fiscal year cycle, you must define the fiscal year version in the given company code as year-dependent. You can specially identify the shortened fiscal year and define fewer posting periods for it, only if the fiscal year version is year-dependent. (See FI Customizing -> *Environment*, and see also **FI Implementation Guide**.)

As long as you are still posting in or before the shortened fiscal year or if you are taking over old data in this time period, then you must also retain the year-dependent fiscal year version. Define the fiscal year version with the full number of posting periods and the corresponding shift in the posting periods (see Topic Non - calenar Fiscal Years). You can redefine the fiscal year as not year-dependent only when the shortened fiscal year is closed from the accounting persepective, and no more correction postings are expected.

Example

The following example shows how the posting periods of a shortened fiscal year should be defined.

Fiscal year YYYY should become a shortened fiscal year with 6 periods (1/1/YYYY - 6/30/YYYY). The non-calendar fiscal year YYYY + 1 should begin on 7/1/YYYY. You must allocate the periods for the calendar year YYYY as follows:

From	To	Period	Year change factor
01/01	01/31	01	0
	02/28	02	0
	03/31	03	0
	04/30	04	0
	05/31	05	0
	06/30	06	0
	07/31	01	+1
	08/31	02	+1
	09/30	03	+1
	10/31	04	+1
	11/30	05	+1
	12/31	06	+1

Historical fiscal year

If the fiscal year version was not defined as year-dependent up to the point when the fiscal year cycle was changed, you have to change the definition of the fiscal year version in FI Customizing. Define the fiscal year version as year-dependent, and specify the posting periods for each calendar year. In order to ensure that the calculation of depreciation remains correct after this change is made, you must also correct the posting periods for the calendar years of all open fiscal years (or, at least two calendar years before the shortened fiscal year).

Future fiscal years

It is also necessary to at least define the calendar year following the shortened fiscal year. In order to predict depreciation, you must also maintain the corresponding future years.

Caution
Please note that for a version with a non-calendar fiscal year, the calendar/period allocations of the last maintained calendar year define only a part of the last fiscal year. Therefore, the system no longer predicts correct values for this fiscal year.

Period control

In principle, the system automatically generates the correct calendar allocations for standard period control for Asset Accounting in a shortened fiscal year (see Topic Period Control). However, since all possible period/calendar combinations cannot be one hundred percent predicted and resolved, you should check the allocations and correct them if necessary (*Asset Customizing -> Valuation -> Valuation keys -> Period control -> Allocation rules*).

Reducing depreciation

It is necessary, in general, to proportionally reduce the depreciation in a shortened fiscal year to correspond to the shortened length of the fiscal year. Therefore, you can define whether the system should correspondingly reduce planned depreciation or if the full year's depreciation should be calculated. This determination is made in the company code definition in Asset Cusomizing. You specify for each depreciation area and depreciation type (ordinary depreciation, special depreciation, and so on), whether depreciation should be reduced or not (in the Customizing transaction for asset company code: *Company code -> Shortened fiscal year*).

Special calculation keys

In certain circumstances, legal requirements make it necessary to use full depreciation for certain depreciation methods (for example, a set percentage rate per year). Therefore, the System enables you to specify for a given internal calculation key that depreciation not be reduced for this key, even though the definition at company code level specifies that depreciation should be reduced. You make this specification for the given calculation key by means of an indicator in the Customizing definition of the internal calculation key.

Depreciation levels in shortened fiscal years

Various depreciation keys (for example, for buildings) use internal calculation keys. These keys work with depreciation levels that have time limitations, and specific depreciation percentage rates are set for each depreciation level (see Topic Internal Calculation Key). These time limitations are set by entering the term of validity for the depreciation level in calendar years and months. A shortened fiscal year has the following affect on the definition of these depreciation levels:

- If you reduce the level depreciation in the shortened fiscal year, the standard depreciation keys delivered by SAP will continue to depreciate correctly. Correct depreciation results because the System makes the useful life (measured in fiscal years) longer in order to correspond to the reduction. If you use this method, no further corrections are necessary. The total period of validity as defined in the calculation key continues to correspond to the useful life in calendar years, and the depreciation in the shortened fiscal year is reduced proportionally to the shortening of the fiscal year.
- If you allow for a full year's depreciation in the shortened fiscal year, then the useful life as measured in calendar years will be shortened. For depreciation using depreciation levels, this means that the full percentage rate defined for the depreciation level will be used. If the shortened fiscal year falls in the validity period of a depreciation level that has a different percentage rate than the one following it, this has the following result:

  Since a validity period defined as a calendar year is longer than the shortened fiscal year, the System continues to depreciate beyond the end of the shortened fiscal year, using the defined

percentage rate. Depreciation continues, even though the full defined percentage was already written off in the shortened fiscal year. For this reason, using the standard key in this instance will not ensure that depreciation is correctly calculated. Therefore you must create your own calculation key and correct the validity periods for the depreciation levels. Reduce the length of the validity period, in which the shortened fiscal year falls, according to the length of the shortened fiscal year. Then change the depreciation levels that follow to correspond to this change.

Example
The following example shows the defined validity periods of a calculation key with five levels (60, 10, 10, 10, 10%) for the individual acquisition years. 1994 is a shortened fiscal year with 9 months (1/1 - 9/30). A full year's depreciation is to be calculated in the shortened fiscal year:

Acq. Yr.	Valid.Yr./Month	Percent
1994	0/9	60
1994	1/9	70
1994	2/9	80
1994	3/9	90
1994	999	100
1993	1/0	60
1993	1/9	70
1993	2/9	80
1993	3/9	90
1993	999	100
1992	1/0	60
1992	2/0	70
1992	2/9	80
1992	3/9	90
1992	999	100
1991	1/0	60
1991	2/0	70
1991	3/0	80
1991	3/9	90
1991	999	100

You do not have to make changes for acquisition years prior to 1991, since the key is only valid for 5 years, and the shortened fiscal year would have no longer have an effect.

Posting Procedure

Asset Accounting is a subsidiary ledger of Financial Accounting, such as Accounts Receivable and Accounts Payable. The system makes it possible to perform all business transactions that affect fixed assets in integration with Financial Accounting or other system components.

This integration with other system components, as well as the general aspects of posting asset transactions, will be explained in the following topic.

Integration

Transaction Types

Line Items

Value Field Update, Value Takeover

Quantity Treatment

Asset Value Date

Document Type

Account Determination

Additional Account Assigment

Reversing Documents

Connecting the AM - System with Non - SAP - Software

Integration

The integration of Asset Accounting with the FI (Financial Accounting) System makes integrated posting of asset acquisitions and retirements with accounts payable and accounts receivable possible. It is also possible to post downpayments in the FI system to assets. The integration with

- MM (Material Management) and
- PM (Plant Maintenance)

also allow for account assignment to assets during certain busines transactions, and possibly also posting to Asset Accounting.

Downpayment request, posting, clearing (FI)

When you create a downpayment request with account assignment to an asset, the system carries out all the checks that it normally would for a direct posting to an asset. You can use the downpayment request as a posting reference when manually posting the downpayment. The payment program can also automatically convert the downpayment request into a downpayment posting.

Caution
There is only one field for entering the account number in the transaction for integrated posting with Financial Accounting. When using account assignment to the asset (posting key 70 or 75), you must enter a hyphen between the asset main number and sub-number.

Purchase requisition - outline agreement - purchase order (MM)

If you post to an asset when entering a purchase requisition or an outline agreement, the system checks, with reference to the planned delivery date, whether the fixed asset actually exists and whether you can post to it. The same checks are carried out if you post to a fixed asset when entering a purchase order. Moreover, the system ensures that you do not exceed the upper limit for low-value assets. You can still change the asset, for which account assignment is to be performed, until receipt of the first goods or invoice for a purchase order.

If you want to carry out account assignment to assets when creating purchase orders, purchase requisitions and outline agreements, the account entered in Financial Accounting for "Acquisition and production costs" must be allocated to a screen layout control that allows entries in the field groups "Asset number / sub-number", "Transaction type", and "Quantity", "Material number".

Goods receipt (MM)

Depending on the specification in Materials Management Customizing, you can post the goods receipt for a purchase order as valuated or non-valuated. In the case of valuated goods receipt, the material value according to the purchase order is capitalized to the fixed asset. Non-valuated goods receipt is posted against a clearing account.

In relation to commercial law, the start-up date normally determines the start of capitalization for a fixed asset. The start-up usually takes place, for the majority of fixed assets, directly after the physical goods receipt. For these two reasons, you should post the goods receipt to the asset as valuated.

Invoice receipt (MM)

You must decide whether invoice receipt takes place before or after goods receipt. In the first case, the invoice amount (minus taxes and, if applicable, cash discount) is capitalized to the asset that is posted. In the second case, providing goods receipt was valuated, the difference arising between the invoice amount (without tax and cash discount) and the posted material value is capitalized. For

invoice receipt after a non-valuated goods receipt, the total invoice amount (minus tax and cash discount) is also capitalized.

Via the selected document type, you can determine whether cash discount should already to be taken into account on invoice receipt.

Material reservation - Material issue (MM)

If you perform account assignment to an asset while making a material reservation, the system checks whether the asset actually exists. Material issue with posting to fixed asset leads to capitalization of the purchase or production costs of the material to the fixed asset. When creating a material issue document, you can refer to a possible reservation (PM).

Activation of maintenance activity

The system provides for you to enter assets as the receivers for the settlement of maintenance orders in the PM system. In this way, you can settle maintenance activities that require capitalization to assets.

Transaction Types

Within Asset Accounting, so-called asset transaction types identify individual business transactions. Every transaction type is allocated to a certain transaction type group. The business transactions are subdivided via the transaction type group as follows:

- Incidents which influence the acquistion and production costs of a fixed asset. This includes: acquisitions, retirements, transfer postings, post-capitalization
- down payments
- investment support measures
- manual depreciation
- write-ups

Specifications (transaction type group)

The transaction type group, to which a which a transaction type belongs, determines the following:

- Which value fields are to be updated in the year segments.
- Whether the transaction refers to the past (for example write-ups) or to the current fiscal year.
- Whether, with reference to a fiscal year, the total of the transactions of a group must have +/- sign.
- According to which rule the start period for the depreciation calculation is determined.
- In which G/L accounts posting is to take place.
- Whether the acquisition date of the fixed asset is to be set during the first transaction of a group.
- Whether proportional accumulated depreciation can be entered for a transaction (for example during post-capitalization), or is to be determined (for example with asset retirements).

The number of possible transaction type groups, as well as the characteristics of the individual groups, is specified in the system.

The system carries out a check for the asset class of the fixed asset involved when posting with a transaction type of the "down payment" group. This means that you can only post to fixed assets via such transaction types if you defined this in the corresponding asset class.

Specifications (transaction type)

Via the individual transaction types the following is determined:

- In which depreciation areas managed on a fixed asset should value fields be updated.
- Whether a not yet capitalized asset should be capitalized.
- Whether, in the case of a complete retirement, a fixed asset should be deactivated.
- Whether the transaction is normally posted with a +/- sign (debit or credit transaction).
- Whether additional posting to the project/order should take place.
- Which document type is proposed during integrated posting.
- Whether it is an asset retirement with or without revenue.
- Whether the system automatically creates a gain/loss posting when posting the asset retirement.
- Which transaction type is used to post acquisitions during transfer posting.
- Which transaction type is to be used for a complete retirement on a new acquisition.
- Whether investment support is to be paid back at asset retirement.
- Whether it is an acquisition from an affilated company, or an asset retirement to an affiliated company.
- The history sheet group to which the transaction type belongs. Transaction types that belong to

the same history sheet group are treated in the same way when you define the asset history sheet.

Some of these specifications are, as can already be seen from the list, dependent on the allocated transaction type group and are mutually exclusive. You cannot make specifications for the group which do not make sense.

Unlike the transaction type groups, you can create new transaction types if required or change existing ones. In the standard version, a series of transaction types allowing posting of the usual business transactions is delivered with Asset Accounting.

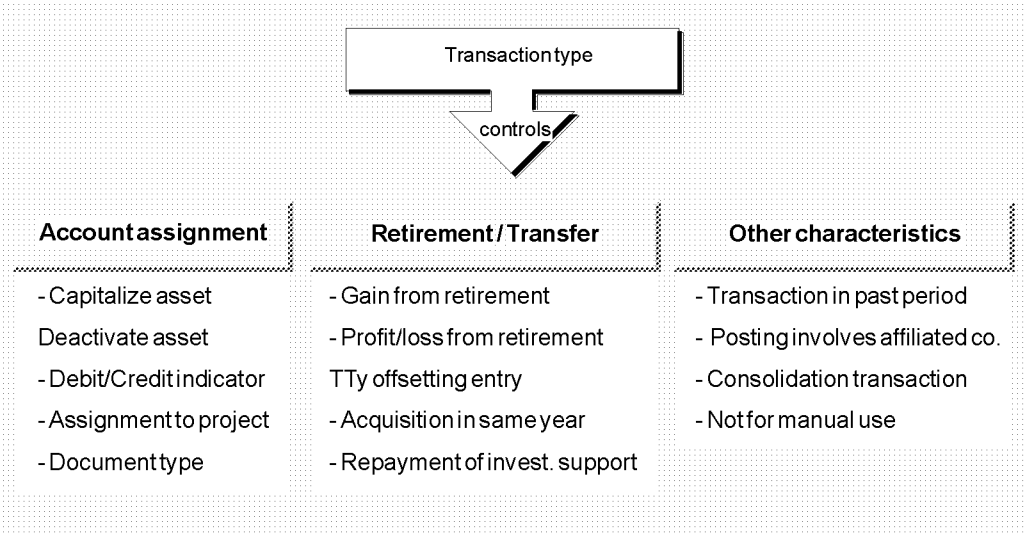


Fig. Specifying Transaction Types

Line Items

From the point of view of Asset Accounting, line items are a proof of how the values displayed for an asset came about. For each transaction, a line item is created for each depreciation area in which posting is to take place. This line item contains the transaction type, asset value date, posted amount, depreciation, and interest falling due on a transaction as well as, if necessary, proportional value adjustments.

If posting is integrated with Financial Accounting, the line items created refer to the number of the corresponding posting document. When you display asset values, you can can also see the corresponding line items.

Proof of origin

There is a special report in the system for the displaying the origin of individual line items.

This report lists the origin of transactions that affect acquisition value in a fiscal year. For each line item, the report lists whether it concerns

- a settlement of an order or project
- a settlement of an asset under construction
- a purchase acquisition (with vendor)
- a transfer from one asset to another
- a balance forward posting following line item settlement (only for assets under construction)
- an acquisition against a clearing account (G/L account)
- a goods receipt or
- a transaction that only affects assets (such as an acquisition in the cost-accounting area only).

For line items from the settlement of an asset under construction, it is also possible to identify the origin of the line item amount. You can see what amounts of which settled line items of the asset under construction make up the line item amount. It is not currently possible to get a similar display for settled line items from orders or projects.

In certain circumstances, it may not be possible to obtain a clear proof of origin for the following transaction types: purchase acquisition, asset transfer, acquisition against clearing account, and goods receipt. If this is the case, the system attempts to determine the origin using plausibility checks, but the transactions are marked with a *(?)*. In these instances, you can only obtain more exact information from the orgiginal document. You can display the original document from the list by selecting the function *Choose*.

Value Field Update, Value Takeover

You can implicitly or explicitly specify the depreciation area where value field update is to be carried out when posting:

- **Explicit specification**
  With the definition of **transaction type**, you can select certain depreciation areas for posting.

- **Implicit specification**
  If no explicit specification of this type was made for a transaction type, value update is carried out in the book area and in all areas which, according to the takeover logic defined in the chart of depreciation, are directly or indirectly dependent on this.

  If no book area is active (for example, for leased assets), posting is carried out in all areas marked as dependent.

If a dependent area is managed in a different currency from the takeover area, amounts are converted into the currency of the dependent area. The posting date of the document is generally used as a value date for currency conversion. However, an alternative value date can be specified on document level.

In the case of asset retirements and transfer postings, the takeover logic of the chart of depreciation does not apply. For each area with values and for which the transaction type has determined that posting should be made, the system determines the proportional retirement amount and the proportional accumulated depreciation.

If you explicitly enter an alternative posting amount for a depreciation area manually, all areas dependent on this area will be updated. Dependent areas whose amounts were already corrected manually will not be updated.

Quantity Treatment

You can specify a basic unit of quantity for certain assets. When you post to such an asset, the system updates for this quantity, according to the debit/credit indicator of the transaction. If an acquisition posting is carried out to a collective asset for low value assets, the system checks, for each unit, whether the acquisition posting exceeds the maximum amount for low value assets. To do this, the acquisition and production costs of the fixed asset, plus the total of the amounts posted from the current document, are divided by the total quantity. The value arrived at is compared with the upper limit which has been set for LVAs.

A quantity-related retirement is always a partial retirement. There is a restriction in the system for partial retirements which stipulates that you may only have posted either old assets data or new acquisitions to an asset. Otherwise the system cannot clearly assess whether the partial retirement applies to old assets data or new assets data. The system determines a percentage rate for the retirement amount based on the ratio between the retirement quantity and the total quantity. If the above-mentioned restriction does not apply to the quantity based asset retirement, you can specify the quantity as additional information.

To ensure accurate quantity management of an asset, you must make the following specifications:

- Define the basic unit of quantity in the screen selection as a required entry field at master data level or asset class level.
- Asset retirements and acquisitions may be posted to balance sheet accounts with quantity specifications. You must specify the quantity in the field status definition of the corresponding balance sheet accounts as additional account assignment (FI Customizing).
- If you would still like to modify the quantity managed on the asset in the asset master record, define the quantity field in the screen selection as maintainable.

Caution
If you entered a quantity when creating a master record (for example: 1), and you then post an acquisition with a quantity, both quantity specifications will be added together.

Asset Value Date

The asset value date, is the value date of an asset transaction from the point of view of Asset Accounting. Every transaction on a capitalized asset initiates automatic calculation of the depreciation falling due on the posting amount. Here the asset value date - possibly corrected in the event of first year convention (period control) of the depreciation key - is the determining factor.

Fiscal years to be posted

In principle, you can post in the AM System to the current fiscal year and all previous fiscal years back to the date of the old data takeover. When you post to past fiscal years, the system automatically updates all the relevant values in the subsequent fiscal years. However, after posting in a previous fiscal year, you need to run the depreciation posting program again for that year and all the following fiscal years up to the current fiscal year. It is also no longer possible to post to fiscal years that have been closed (see the topic Year - end Closing).

Capitalization date

You can enter the capitalization date manually when you create the asset master record. The system then uses this date as the default asset value date at the first acquisition posting to the asset. If you do not enter a capitalization date in the asset master record, the system automatically adopts the asset value date of the posting as the capitalization date. The system inserts the asset value date of the first acquisition posting in the capitalization date field of the asset master record ("capitalization on..."), when a capitalizing transaction type is used. The system determines the start period for the depreciation calculation from the asset value date and the period control specified in the internal calculation key of the respective transaction type. The depreciation start date is the first day of the start period. In a similar fashion, the system determines the book value of an asset at the point of retirement.

Default Values

Since the asset value date can have a direct influence on the amount of depreciation, the system creates a default value when it can. The overview that follows shows the default asset value date for the most important asset transactions:

Initial aquis.	Posting date/capitalization date of master record
Subs. acquis. in the same year	Asset value date of initial acquis. (=Cap. date)
Subs. acquis. in later years	Posting date
Retirement	No default value (required entry)

Automatically Set Asset Value Date

In the following posting transactions you cannot enter a specific asset value date. The system thus uses the following dates:

Acquisition from purchase	Posting date
Goods receipt (valuated)	Posting date
Invoice receipt (valuated)	Posting date
Invoice receipt (difference posting)	Value date of invoice receipt
Stock withdrawal	Posting date

Document Type

The document type classifies the accounting documents. It is noted in the document header.

The document type specifies the following, among other things:

- Which account types can be posted in a document.
- Which interval is used for document number assignment.
- Whether the document number is to be assigned externally or internally.
- Whether the document type can be used online or only for batch input.
- Whether cash discounts are to be taken into account (for vendor or customer postings). The cash discount percentage rate is managed in the general terms of payment of the vendor or customer master in Financial Accounting.

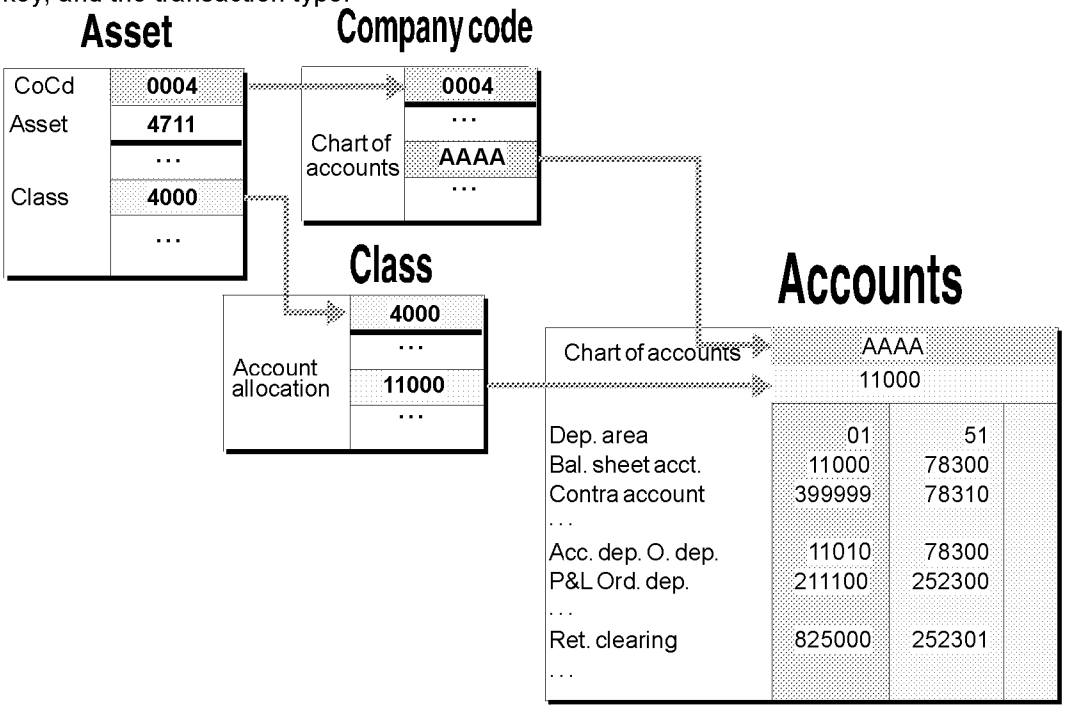
In order to be able to assign to fixed assets within a document, you must always select a document type that allows you to post to accounts of account type "A".

For postings with an automatic offsetting entry or transfers within Asset Accounting (that is, in the case of postings not integrated with Financial Accounting), you must also make sure that a document type is selected with internal number assignment.

When defining the transaction types, you can store a document type as a default value for each transaction type.

Account Determination

When posting to an asset, the System determines the reconciliation accounts that should be posted in Financial Accounting. The System makes this determination on the basis of the chart of accounts valid for the company code, the depreciation area to be posted, the account allocation key, and the transaction type.



Dia: Account Determination

Chart of accounts

The chart of accounts contains all accounts in the General Ledger. In Financial Accounting, exactly one chart of accounts is allocated to every company code. This allocation is also binding for Asset Accounting

Automatic posting area

When you define the depreciation areas, you can determine whether the values of an area should be automatically entered in Financial Accounting.

Account allocation key

The account allocation key is maintained at asset class level. The account allocation key defines the accounts in Financial Accounting in which automatic posting should take place. This definition is effective for each chart of depreciation (company code) and for each depreciation area that is defined as an automatic posting area in the respective chart of depreciation.

You must specify the account allocation key in the asset class. In this way a uniform account allocation for the class is guaranteed. SAP delivers account allocation keys for the standard charts of depreciation and standard charts of accounts.

Transaction type

The transaction type identifies the type of business transaction. Using the transaction type, the System posts the transaction to the appropriate accounts of the given account allocation.

Additional Account Assigment

If you use Asset Accounting in conjunction with other modules, the following additional account assignments are possible, depending on the business transaction to be posted:

- business area
- cost center
- profit center
- order
- project

All transactions in asset accounting can also be automatically posted at the business area level. There is one prerequisite, however. You must specify for the company code that business area balance sheets are to be created. For every posting transaction, the system then determines the business area to be posted. The system makes this determination based on the asset master record, and transfers this information to Financial Accounting for the automatic posting.

Special account assignment for transactions

At the present time, asset retirement is the only asset transaction that plays a special role in regard to account assignment. You can post gain or loss from asset retirement to a profit center (see the topic Retirement). The system determines the profit center to be posted on the basis of the cost center specified in the asset master record. Further requirements for account assignment to a profit center are outlined below:

- The field status definition of the corresponding reconciliation accounts in Financial Accounting (accounts for revenue and loss) have to allow for account assignment to cost center and profit center.
- The corresponding accounts (cost types) in cost center accounting have to be defined using the cost type "revenue element."
- The cost center, to which the asset master record is allocated, must be allocated to a profit center in its master record.

In addition to the account assignment to the profit center, the system automatically carries out the corresponding posting to the respective cost center. It is not possible to clear the line items posted to the cost center to other CO objects. This prevents a double clearing to the same profit center. However, these line items can still be evaluated in the same way as other CO line items.

Value adjustments (depreciation)

You can post value adjustments to orders and cost centers. You specify this additional account assignment in Asset Customizing in the posting rules for the depreciation posting program (see the topic Posting Depreciation). The posting program then posts to the cost center (or order) specified in the asset master record.

Reversing Documents

If you use the Financial Accounting module, you can automatically reverse all transactions for which the system creates a posting document via a special function of Financial Accounting. With the exception of asset retirements, you can also reverse every asset posting using the reversal transaction for Asset Accounting *(Posting -> Reversal -> FI document).*

Reversal of AM transaction in partial document

You can use this function to reverse line items that are automatically created in Asset Accounting (such as an asset sale with vendor).

This might be necessary, for example, if the entire document can no longer be reversed, because the open items belonging to the document have already been cleared.

You enter the document and asset number. The system creates the reversal posting for Financial Accounting and the corresponding line items for Asset Accounting. The system updates the values of the asset.

Reversal of asset line items

This function makes it possible to reverse asset transactions that were not posted to Financial Accounting (for example, manual depreciation). The sytem supplies you with a list of all the transactions that come under consideration for reversal. You select from this list.

Reversal of the settlement of an asset under construction

See the topic Capitalizing Asset Under ConstructionCapitalizing_Asset_Under_Construction

Connecting the AM - System with Non - SAP - Software

It is possible to program your own reports in order to transfer depreciation and transactions from asset accounting to non-SAP software. The reports you program select the data on depreciation and transactions from the SAP system.

Selecting depreciation

Run a periodic depreciation posting run, in order for the system to calculate the depreciation to be posted (see the topic Posting Depreciation). The depreciation posting run creates a posting session. When you are also using the SAP Financial Accounting system, you can process these posting sessions in the FI system using batch input. At the same time, the system enters

- per posting run and
- per asset

certain values in table **ANLP**. These values are the depreciation already psoted in the given fiscal year, and the depreciation to be posted in the posting run.

The posting session that is created during the depreciation posting run cannot be used to transfer depreciation values to a different sysstem. In order to make the data transfer, you need your own report. This report has to select the values to be posted, per posting run, from table ANLP.

Selecting transactions

You can read the line items from Asset Management, using your own reports, from the following tables:

- **ANEP**
  This table contains the individual line items for posted transactions, per asset and depreciation area. There is also an indicator that is set when proportional values were created for certain line items.
- **ANEA**
  When proportional value adjustments for the line items exist, they are contained in this table.

NOTE
You will find the exact structure of the AM tables (including the field documentation) in the table manual. You can print this manual from the information system of the SAP Repository (Case -> Development -> Data Dictionary -> Info system).

Business Transactions

The system allows you to carry out the usual business transactions in a user-friendly way. The various business transactions and their organizational backround in the system are explained in the following. Please see the User Guide for Information on carrying out the business transactions.

Acquisition (general)

Purchase Acquisition

Acquisition from Purchase Order

Acquisition from In - house Production

Acquisition from Warehouse

Acquisition Affiliated Companies

Retirement

Asset Sale

Asset Retirement by Scrapping

Asset Retirement for Passive Investment Support

Asset Retirement to an Affiliated Company

Transfer Postings

Transfer from Asset to Asset (within Company Code)

Transfer Posting Between Two Affiliated Companies

Capitalizing Asset Under ConstructionCapitalizing_Asset_Under_Construction

Down Payments to Assets Under Consructions

Post Capitalization

Write - Ups

Transfer of Reserves

Forecasting Manual depreciation

Acquisition (general)

In the R/3 System, you can post all transactions that affect fixed assets directly in Asset Accounting. If you are using Assets Accounting in integration with other R/3 components, however, it may make sense, for reasons of efficiency, to post acquisitions in other departments. The following departments (R/3-Systems) might be considered for the posting of asset acquisitions:

- Goods receipt/invoice verification (MM) -
- Warehouse (MM)
- Settlement of orders/projects (CO-OPA)

Special functions for aquisitions from affiliated companies make it possible to represent the transfer between companies correctly in the asset history sheets of respective companies.

Purchase Acquisition

A purchase acquisition can be posted in tree different ways from the accounting point of view:

- **Acquisition with vendor**
  If Accounts Payable is also installed, it is recommended to use the integration advantage and to post "fixed asset from vendor" directly.
  Thus the time and energy required for data entry and the possibility for discrepancies is minimized. Planned cash discount deductions can already be taken into account with the acquisition of the fixed asset. When using a document type which has a net posting facility, the system determines the cash discount deduction automatically by means of the specified terms of payment, and capitalizes the invoice amount on the fixed asset, minus sales tax and cash discount.

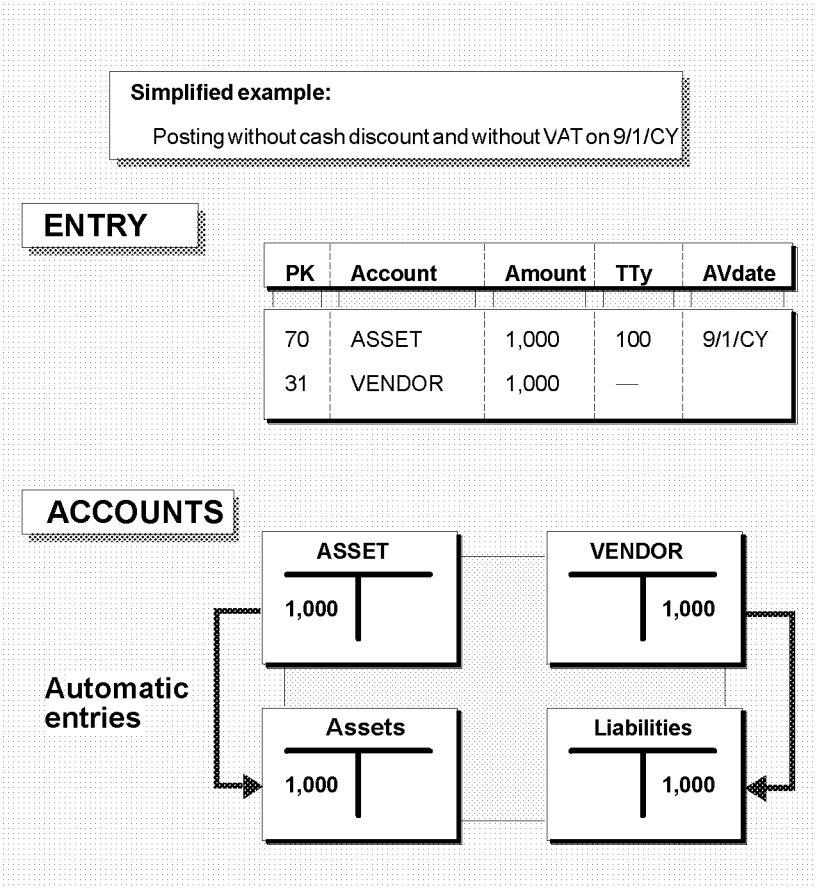


Fig. Acquisition with vendor

- **Acquisition against clearing account/automatic clearing**
  If, for organizational reasons, you do not want to use this integration advantage, the following procedure is recommended: Post the invoice against a clearing account and later "fixed asset to clearing account". The system automatically determines the clearing account based on the account allocation. You can have the system clear the posting automatically on a periodic basis.

- **Acquisition against clearing account/manual clearing**

If the clearing account used is an open item account, when you post the acquisition, you can manually clear the posting to the clearing account (vendor invoice) at the same time (transfer with clearing). The corresponding transaction allows you to select all open items, per clearing account (account type S for General Ledger account) according to varying criteria.

Acquisition from Purchase Order

When you are using the AM system in conjunction with the MM (Material Management) system, you can post an asset acquisition within the framework of the ordering process. Unlike most other business transactions, acquisition from purchase using a purchase order requires a sequence of steps to be performed at separate time intervals:

- o Creating the order
- o Posting the goods receipt
- o Posting the invoice receipt

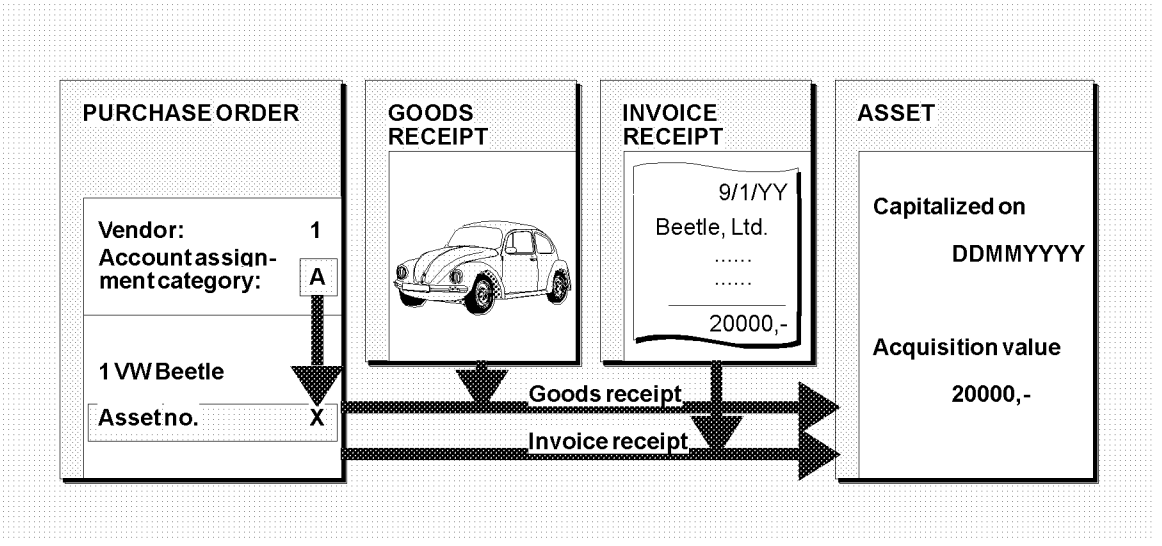


Fig. Acquisition from Purchase Order

Purchase order

When entering an order item which is assigned to a fixed asset account (account assignment type A), the system checks the specified fixed asset to see if it exists and determines whether posting can be carried out on the fixed asset with regard to the planned delivery date. The system determines the G/L account to be posted as well as the additional account assignments valid for this delivery date, and stores these for the order item.

For account assignment to a low value asset or collective LVA, the system ensures that the APC of the fixed asset together with the values of ordered goods of the individual items do not exceed the tolerance limit for purchase orders.

This check also takes into account the order quantity for collective LVAs. The total amount determined by the system (APC + values of ordered goods) is divided by the total quantity determined (existing quantity + order quantities) and the amount thus determined is compared with the specified tolerance limit.

If you post from a purchase order to fixed asset, no values will be updated on the fixed asset and also no line items created. Therefore, the account assignment of the order item can still be changed until receipt of the first goods or invoice.

Goods receipt, invoice receipt

There are several possibilities for carrying out the business transaction further:

- o The goods receipt is carried out before the invoice receipt and is posted non-valuated. The

creation of the line items and value update is carried out only on receipt of the invoice.

- The goods receipt is carried out before the invoice receipt and the system carries out a valuated posting. Line items are created and the value fields of the fixed asset updated. If differences in the amounts result later when posting the invoice, these lead to a corresponding correction of the fixed asset.
- The invoice receipt is carried out before the goods receipt. Line items are created and the value fields updated.

The system determines via the account assignment type (A = asset) whether goods receipt is valuated or non-valuated (*Customizing-Purchasing -> Functions -> Acc. Assign. Category*). For business reasons, it is recommended to post valuated goods receipts since this date comes closest to matching the start-up date.

Acquisition from In - house Production

Acquisition from in-house production is generally coupled with the settlement of orders (CO-OPA). When settling an order, the portions that require capitalization can be posted to assets. It is also possible to directly post acquisition and production costs directly in Asset Accounting as an acquisition. In this case, you have to determine the amount that is to be capitalized yourself.

In order to assist in evaluating reports, there is a special transaction type for acquisitions from in-house production. The same accounts are used as for a purchase acquisition.

Acquisition from Warehouse

During in-plant production of fixed assets, it is frequently the case that parts from the warehouse are issued and used for building the new fixed asset. This results in a transfer of current assets to fixed assets.

If Asset Accounting is being used in conjunction with the Material Management (MM) module, it is possible to post this transfer as one transaction. In this case, you can use special transaction types, which post to the asset, for the movement of material in the corresponding warehouse (inventory management). The system then capitalizes the acquisition and production costs of the material for the asset that is specified.

Acquisition Affiliated Companies

For acquisition from an affiliated company, a special method was developed that allows you to display the acquisition in the asset history sheet, from the point of view of the individual company, as an acquisition. It is shown in the group history sheet, however, as a transfer addition that, together with the outgoing transfer posting, balances to zero.

For this purpose, you need a depreciation area that takes its values from the book area and is marked as a consolidation area. Via a special indicator, the transaction type used informs the system that the acquisition taking place is from an affiliated company.

By means of this specification, the transaction type entered in the consolidation area is interpreted as a transfer transaction type, although it is actually an acquisition transaction type according to period control.

Retirement

Using predefined transaction types, the system allows you to post:

- asset sales
- asset retirements by scrapping
- asset retirements due to force majeure
- asset retirements to affiliated companies

You can define further transaction types if you want a more detailed substructure for analysis purposes.

An asset retirement can refer to an entire fixed asset (complete retirement) or part of a fixed asset (partial retirement). In both cases, the system automatically determines, using the asset retirement dates entered, the amounts to be closed out for each depreciation area. If necessary in individual depreciation areas, you can also manually correct the retirement amounts that were calculated by the system. The system then recalculates the retirement amounts for that area, and any areas that are dependent on that area.

The asset value date of the retirement is indicated in the asset master record. You cannot post any transactions with a value date before the value date of the last retirement. If you, nevertheless, need to post such a transaction, you must first reverse all retirements that lie after the value date of the belated posting. After posting the belated transaction, you can then re-post the retirements.

Transaction type

Make sure that you select the correct transaction type for both partial and complete retirement. For the complete retirement of a fixed asset acquired in previous years, you must always select a transaction type that refers to old assets data from previous fiscal years. A partial retirement can always refer to either already existing assets data or acquisitions in the current fiscal year.

From the value date point of view, the complete retirement of a fixed asset is only possible if all transactions to the fixed asset were posted before the asset value date of asset retirement. You must offset or reverse down payments and investment support measures relating to the same posting year before complete retirement.

Partial retirement

You can implement the partial retirement of a fixed asset by entering

- the amount of the aquisition and production cost being retired
- a percentage rate
- a quantity.

When you enter the amount of the acquisition and production cost that is being retired, the system determines the percentage to be deducted from the fixed asset starting from the first depreciation area in which posting is to take place. You can enter a quantity, provided that you have not specified a retirement amount or percentage rate. The system interprets the quantity as a ratio to the total quantity of the asset and thus determines the asset retirement percentage rate.

Proportional value adjustment

Based on the value date and period control, the system automatically determines the reference period for the retirement. The system automatically determines any depreciation (value adjustment) that is applicable to the part of the asset being retired, up to the point of the reference period (retirement). The system automatically retires this depreciation at the time of the retirement transaction. This procedure guarantees that the percentage of the book value that is retired is

identical with the percentage of the acquisition and production costs that is retired.

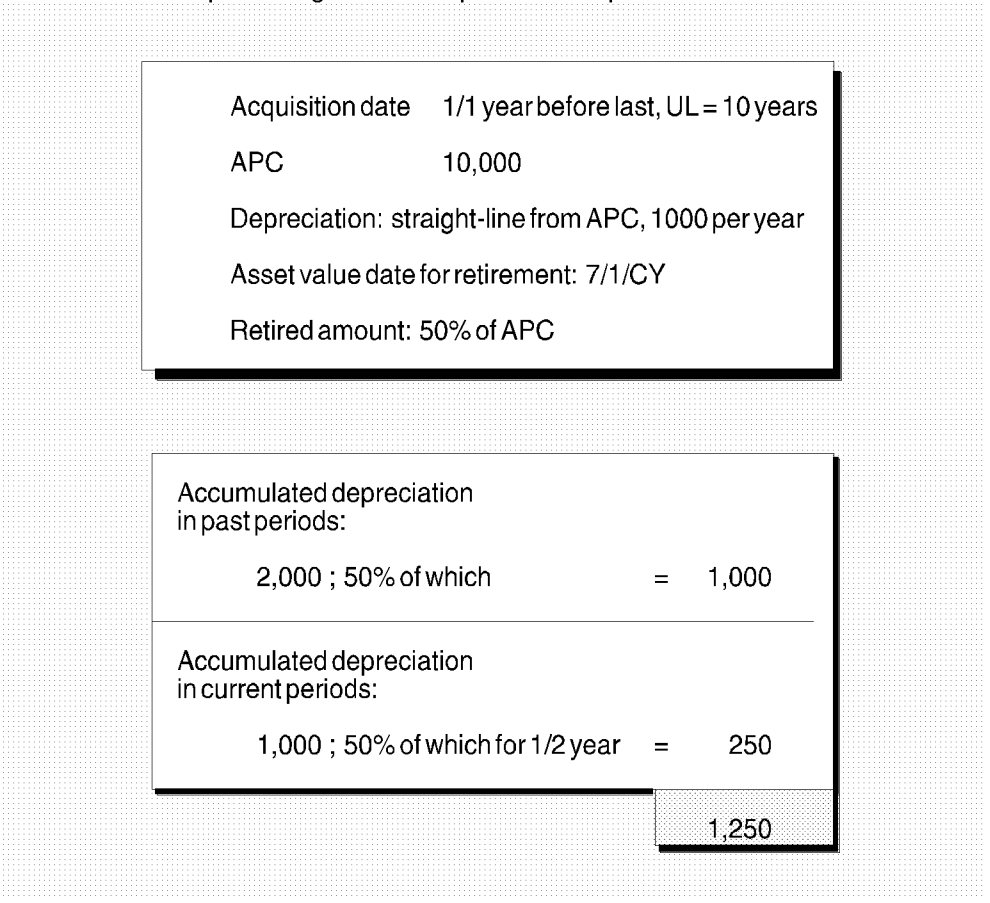

Acquisition date 1/1 year before last, UL = 10 years
APC 10,000
Depreciation: straight-line from APC, 1000 per year
Asset value date for retirement: 7/1/CY
Retired amount: 50% of APC
Accumulated depreciation in past periods:
2,000 ; 50% of which = 1,000
Accumulated depreciation in current periods:
1,000 ; 50% of which for 1/2 year = 250
1,250

Fig. Determining proportional value adjustments

Retiring several asset sub-numbers simultaneously

The system enables you to post the complete retirement of several sub-numbers of a fixed asset in one step (generic entry using * in the sub-number field). The system performs asset postings and value adjustment postings as totals.

Additional account assignment for gain/loss

When posting an asset retirement, you enter the amount received for the asset being retired. The system automatically calculates the gain or loss on the sale as the difference between this amount received and the book value of the asset that was retired. Since gain or loss arising from asset retirement does not accrue periodically, it only has a limited relevance to cost accounting. Therefore, the system only posts this gain or loss statistically to the cost center. The actual posting to CO takes place in the profit center, to which the cost center is allocated (see the topic Additional Account Assigment).

Retirement costs

For statistical purposes, you can enter retirement costs (for example, removal expenses) withing the framework of the retirement posting. The standard report for asset retirements (RAABGA01) then displays these costs in a separate field. You should note that gain/loss and retirement costs are displayed independently of one another. Retirement costs are **not** automatically transferred to cost accounting.

Subsequent revenue/costs

It is sometimes necessary to post revenue or costs for an asset retirement that has already been posted. For example, you might need to post an insurance benefit as subsequent revenue to an asset, although the asset has already been scrapped (deactivated).

There are two transactions in the asset menu that make it possible to create line items for cost or revenue after the fact. You can evaluate these asset line items in the standard retirement list. However, when you use this method, there is no integration with Fincancial Accounting (or cost accounting). This means that you must post the costs or revenue again explicitly in Financial Acounting in order to create a corresponding posting document (CO document).

Posting remaining book value

If you set an indicator in the definition of the asset company code, the system will post the remaining book value at the time of the asset retirement. The remaining book value is posted either to the account "Clearing of revenue from asset sale" or "Clearing of revenue-Sale to affiliated company." There is then no posting of gain or loss (for sale), or loss from retirement (from scrapping). This type of posting is necessary, for example, due to legal requirements in France.

Asset Sale

In Asset Accounting, the removal of an asset by sale, as well as any resulting revenue, can be posted in a single step. At the same time, you can choose to post to Accounts Receivable (through integration with Financial Accounting) or to a reconciliation account.

Asset sale with customer

If the Financial Accounting module is being used along with AM when an asset is sold, the system enables you to post the entry to Accounts Receivable, the revenue posting and the asset retirement in one step. In the corresponding posting transaction, you must first post the revenue (A/R to revenue from asset sale), and then post the asset retirement. An indicator in the posting transaction determines that the system posts the asset retirement after the revenue posting.

The prerequisite for this is in the field status group of the revenue account in Financial Accounting, to which the revenue should be posted. The "Asset retirement" field (category Asset Accounting) must be defined as a required or optional entry field in the field status group of this revenue account.

When using the standard transaction types, the system automatically creates a profit posting or a loss posting as well as a revenue clearing entry in addition to the asset and accumulated depreciation correction postings.

The following diagram shows the retirement of an asset with an acquisition and production cost of 5000, sale price of 3000. Due to accumulated depreciation, the net book value at retirement is 3750, resulting in a loss of 750.

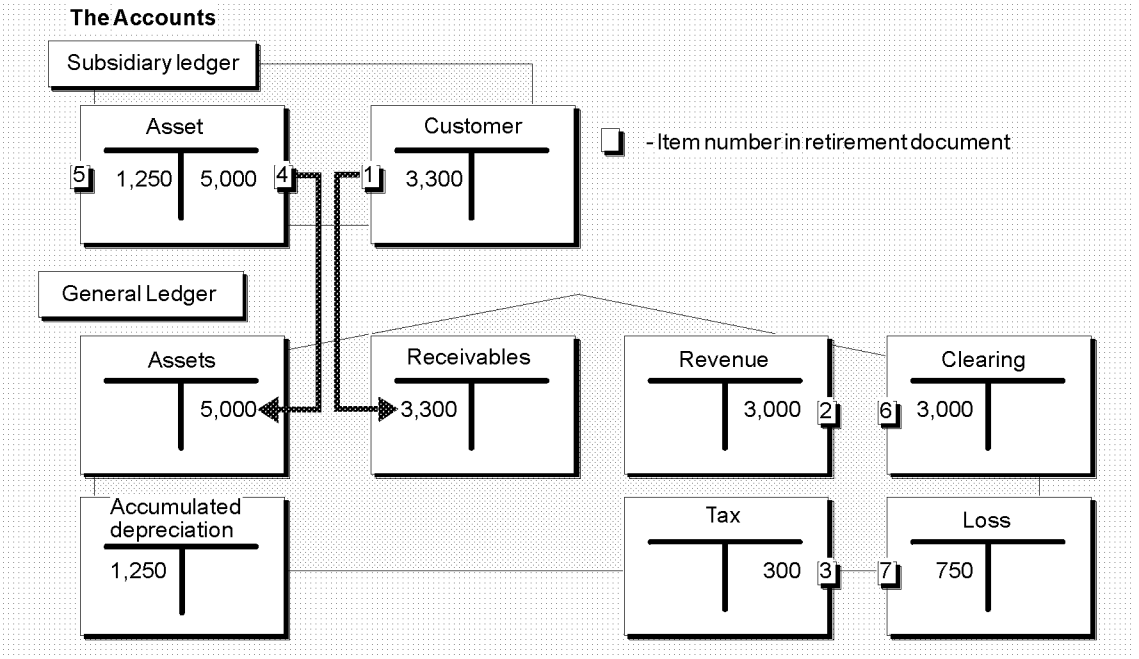


Fig. Asset sale with customer

The revenue clearing entry is the same amount as the revenue posting to the account "revenue for asset sale (clearing account)" but with a reverse debit/credit indicator. This account is needed because the sale of a fixed asset is subject to value-added tax (=> automatic generation of a tax posting in Financial Accounting). Internal clearing must, however, take place without taxes.

The profit/loss postings, as well as the revenue clearing entries, are dependent on transaction type. Their automatic creation is controlled by the indicator "profit/loss from asset retirement" in the

definition of the transaction type and can be deselected if required. In this case, you must manually enter the corresponding postings.

Asset sale without customer

For asset sale without a customer, the posting is carried out with the help of a separate posting transaction in Asset Accounting. The same postings are created as during the "sale with customer" transaction, with the exception of the customer and revenue posting.

For asset sale without a customer, you must make sure you select a transaction type that automatically creates the profit/loss posting and the revenue clearing entry. Otherwise, the debit/credit entries will not balance and, as a consequence, the document cannot be posted.

Asset Retirement by Scrapping

Asset retirement by scrapping is posted with the help of a separate transaction in Asset Accounting. This is similar to asset sale without customer.

The created postings correspond to those for asset sale without customer, apart from the profit/loss posting and the revenue posting. In place of the profit/loss posting, a "loss from asset retirement without revenue" posting is created. Revenue posting is omitted.

Asset Retirement for Passive Investment Support

If you managed investment support measures, represented on the liabilities side, for a fixed asset, you must take acount of the current situation and ensure that the correct transaction type is selected for asset retirement.

If the asset retirement is carried out for the support measure within the required period of retention, there are two possible procedures depending on the transaction type you select. The system creates either a posting for the writing back of the support measure due to retirement, or an "investment support refund" in connection with an "expense from refund investment support" posting.

If investment support measures were introduced in the same fiscal year in which the asset retirement is also to be posted, the support measures must be reversed before posting the asset retirement.

Asset Retirement to an Affiliated Company

A special technique has been developed for asset retirement to an affiliated company. This technique allows the transaction to be displayed from the point of view of the individual company as an asset retirement in the asset history sheet. In the group history sheet, however, the transaction is displayed as an outgoing transfer cancelling out the incoming transfer.

For this purpose, you need a depreciation area that takes its values from the book depreciation area and is identified as a consolidation area. Using an indicator, the special transaction type informs the system that an asset retirement is being carried out to an affiliated company. Due to this specification, the system interprets asset retirement transaction types entered in the consolidation area as a transfer transaction type. (see the topic Transfer Posting Between Two Affiliated Companies).

Transfer Postings

The system distinguishes among a number of different business transactions that can lead to transfers:

- **Transfer from Asset to Asset (within Company Code)**
- **Transfer Posting Between Two Affiliated Companies**
- **capitalizing Asset Under ConstructionCapitalizing_Asset_Under_Construction**
- Transfers from current assets (see the topic Acquisition from Warehouse)

Transfer from Asset to Asset (within Company Code)

In principle, transfer posting from one fixed asset to another within the same company code can be carried out in one step. A prerequisite, however, for an automatic transfer posting is that no values from the asset being transferred are lost, and that every area of the receiving asset is supplied with values. The particulars are as follows:

- Each depreciation area of the transferred asset, for which the system determined a retirement amount, must also be managed in the receiving asset.
- Each non-dependent depreciation area in the receiving asset must also be managed in the transferred one.
- If ordinary depreciation is calculated for an area of the transferred asset, you must also provide for this in the corresponding area of the receiving asset. The same applies for special depreciation.
- The keys used for investment support measures must correspond in each area.

If automatic transfer is not possible due to these restrictions, you must manually post an asset retirement and an acquisition.

As with asset retirement, the transfer posting procedure distinguishes between old assets data and new acquisitions. Full and partial transfer postings are possible. Partial transfer posting can be effected by specifying a quantity, a percentage rate, or an amount. The system determines the amounts to be transferred and the proportional accumulated depreciation in the same way as for asset retirement posting.

Start of depreciation

There is an indicator in the definition of the transaction type for retirement transfers (old assets data) that allows you to take over the historical capitalization date and depreciation start date from the asset being retired. The transfer of these dates is only possible if the capitalization date and the depreciation start date are not explicitly entered in the asset master record of the receiving asset. If this indicator is not set, the system determines the capitalization date from the asset value date of the transfer.

Caution
*It does **not** make sense to make this specification for transaction types for the capitalization of assets under construction.*

Transfer Posting Between Two Affiliated Companies

Depending on the viewpoint of the company, transfer posting of a fixed asset between two affiliated companies represents either a retirement or an acquisition. From the group concern point of view, however, the transaction is regarded as a transfer posting that balances to zero in the group asset history sheet. For this reason, there is an indicator in the Customizing definition of the depreciation area that enables you to handle the transfer from the point of view of the company. This indicator has the following affects:

- Retirements to (or acquisitions from) affiliated companies are automatically posted in the group depreciation areas using transaction types for transfers. This procedure ensures the transaction is displayed properly in the asset history sheet for the group.
- For these depreciation areas, you can enter the historical APC, as well as the proportional values from the current and closed fiscal years, within the posting transaction.

The following diagram shows a transfer between affilated companies and its representation in the asset history sheet:

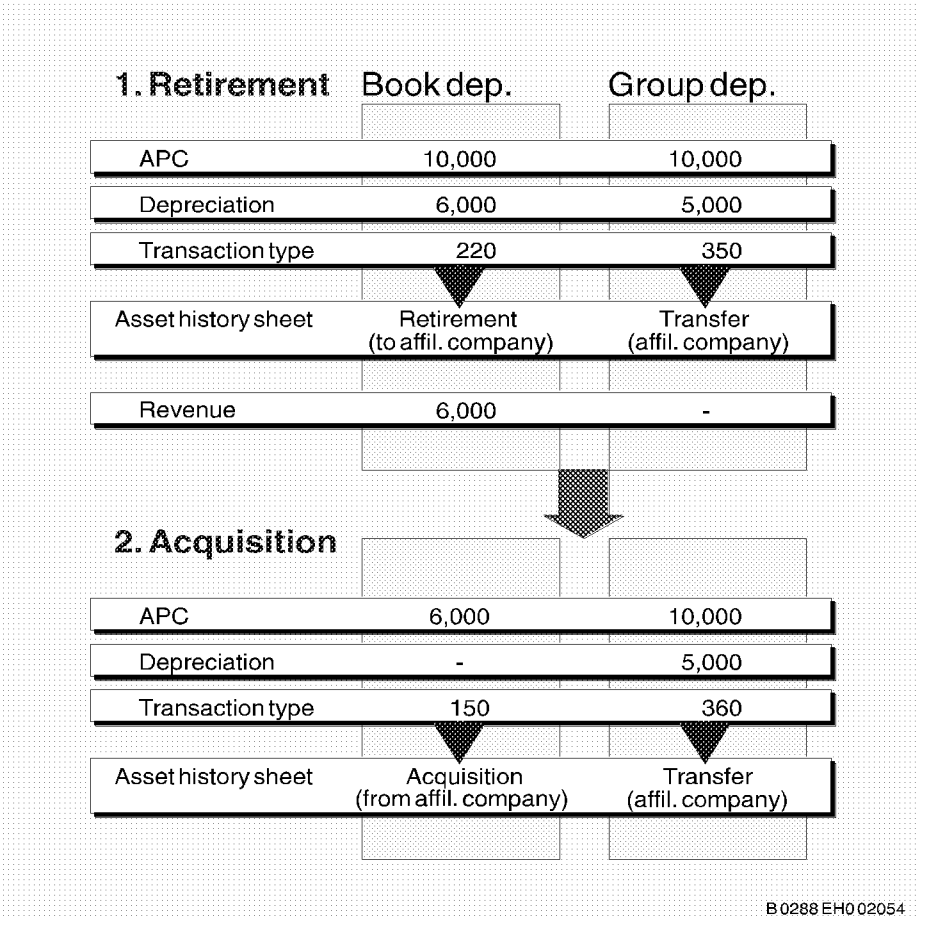


Fig. Transfer between affiliated companies

As of release 3.0, it will be possible to post a transfer between affiliated companies with one transaction, providing both companies are company codes within a single client. Until that point, you must post the transaction in a two-step process: asset retirement and acquisition. There are special transaction types for this posting (220/150). In those depreciation areas that are specified as consolidation areas in their Customizing definition, the system automatically identifies the corresponding transactions as transfers (transaction type 350/351). When posting without customer

or vendor, you must always enter the company ID. For the retirement as well as the acquisition, you must enter the company ID of the receiver or the sender. If you are posting with customer or vendor, you must also assign a company ID to the customer or vendor.

The line items created during asset retirement can then be used as a reference for entering the acquisition. They display the retirement amounts determined for the individual depreciation areas and the proportional value adjustments.

Capitalizing Asset Under Construction

An asset under construction can be capitalized in the system in three different ways:

- o Summary transfer of assets under construction to capitalized assets
- o Detailed, line item settlement of the asset under construction (with open item management) to various recipients.
- o Settlement of assets under construction managed as CO orders/projects

Summary transfer

The procedure corresponds to the procedure for the transfer of two assets within the same company code. Before carrying out a full transfer of an asset under construction, you have to reverse any downpayments that were posted in the current fiscal year. Downpayments are ignored for a partial transfer.

Special transaction types for the transfer of assets under construction allow for tranfers to be displayed in the asset history sheet as acquisitions to fixed assets.

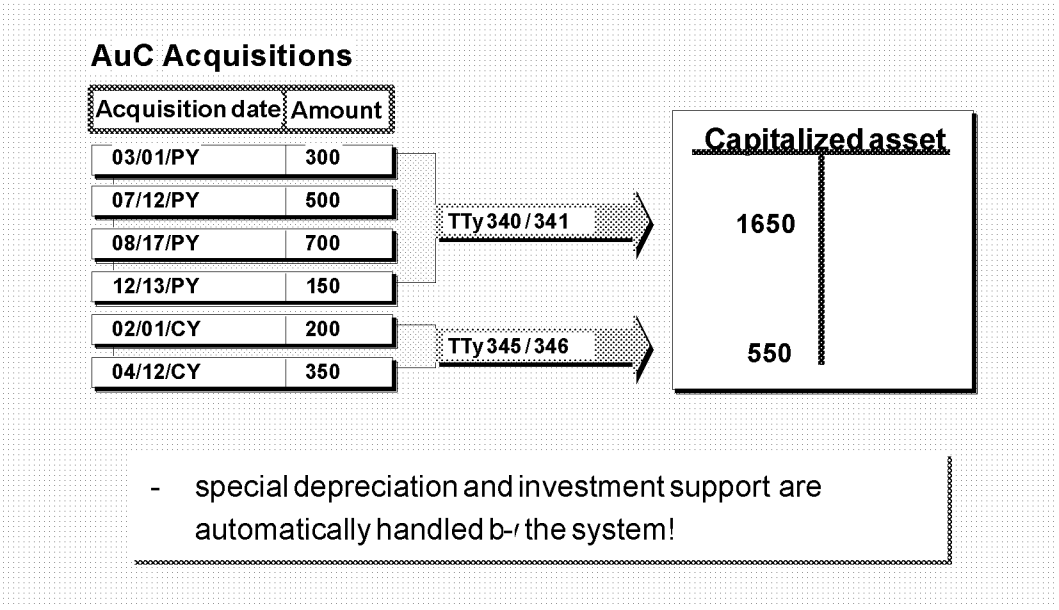


Fig. Summary transfer

Detailed line item settlement

If the AM IC (Investment Controlling) component is installed, you can accumulate costs under a purely technical aspect in an asset under construction. You do not need to consider the later creation of fixed assets at this point. During the construction phase, you can accumulate all acquisitions for an investment project, such as

- o external activity (acquisition from vendor)
- o internal activity (internal order) or
- o stock material (issue from warehouse)

in a single asset. When using this 'collective management' of assets under construction, it is possible to manage the individual acquistions as open items over the course of several fiscal years. At completion, the line items must be cleared and then distributed to the various receivers. The system activates open item management when an asset under construction is created, if you set the corresponding indicator in the asset class.

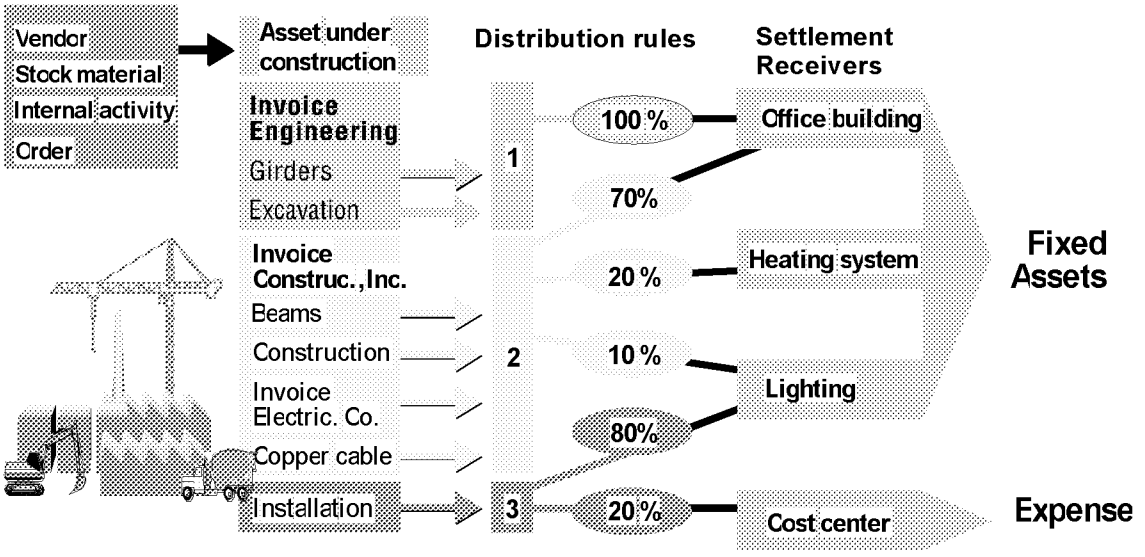


Fig. Line item settlement

The system calculates depreciation and interest for the asset under construction according to the depreciation terms specified in the asset master record and/or asset class. You can also post investment support measures to the asset under construction. However, you cannot transfer investment support for an asset under contruction that is posted in the year of capitalization to a capitalized asset. The reason for this exclusion is that you can no longer distinguish if the investment support is for acquisitions in the current fiscal year or in previous fiscal years.

Allocation of distribution rules

Line item settlement is carried out by using distribution rules. Several distribution rules form a distribution rule group. You can allocate these groups to one or more line items of an asset. Distribution rules consist of a distribution key and a receiver. The distribution key can be equivalence numbers or percentage rates. In this way, you can distribute any number of combinations of line items to any number of combinations of receivers.

The transaction used for this allows you to conveniently select line items for allocation to a distribution rule group. In Asset Customizing (Menu: *Transactions*) you can define different display versions for this transaction. The versions then determine what information is displayed when you call up the line items (document number, posting text, and so forth). Interfaces also give you access to other functions of Asset Accounting (for example, display asset master record or asset values).

Example

Distribution rule group with percentage distribution

Distribution key	Receiver (Asset)
10%	10531-1000
20%	10531-2000
40%	10533-0000
30%	10533-1000

Distribution rule group with equivalence numbers

1 : 2 : 4 : 1

Receiver

You must settle those parts of the asset under construction that require capitalization to capitalized assets. Those parts that do not require capitalization (expense) can be settled as a correction posting to cost centers. You can specify a corresponding cost element in the account allocation in Asset Accounting.

In addition, it is possible to settle to General Ledger accounts. However, these G/L accounts cannot be defined with additional account assignment to a CO object. Therefore, you should first settle to reconciliation accounts, if necessary, and then transfer the values to the corresponding accounts in Financial Accounting.

Settlement profile

You define settlement profiles in Asset Cusomizing under *Transactions*. These profiles determine the receivers to which you can settle. In order to settle an asset under construction, you must define a corresponding profile in the Customizing definition of the asset company code (*Valuation -> Asset company code -> Co. Code definition*).

Initiating the settlement

You can set up the settlement profiles and then carry out the corresponding posting of the line items at a later point in time, since a separate transaction exists for the actual settlement. This transaction initiates the settlement posting for the selected assets under construction, and creates the necessary posting documents.

During this process, the system automatically separates the transfer of existing assets data from acquisitions that took place in the year of capitalization. When the existing assets data is transferred, (special) depreciation and investment support measures are also posted proportionally. The system automatically generates carry-over postings for partial capitalization.

There is a standard report (RAHERK01) that enables you to trace the origin of the items in the capitalized asset back to the original asset under construction.

Reversals

There is a special transaction for reversing the settlement of an asset under construction *(Postings -> Reversal -> Capitalization of asset under construction).* Enter the asset number of the asset under construction that you want to reverse. The system then reverses all documents posted in conjunction with the last settlement of the asset. In order to reverse a settlement prior to the most recent settlement, you must first reverse the settlements that follow the one you want to reverse in chronological order.

You cannot use this transaction to reverse the settlement of assets under construction that are only managed for cost-accounting purposes.

Old data takeover

The transfer of open items for an asset under construction is possible using the normal transaction for creating old assets data (see the topic Takeover Procedure).

Investment orders/projects

The comprehensive functions of the R/3 System CO-OPA (Order Project Cost Accounting) are

especially suited for broad investment projects with a large proportion of internal production. As the assets are being produced, they can be managed in detail as orders or projects. Those parts that require capitalization can then be settled to assets. Settlement is carried out by means of distribution rules. However, you can only settle orders and projects based on the total costs accumulated (not by line item).

A special procedure is necessary so that investment orders and projects that are not closed at the end of the fiscal year can be correctly displayed in the balance sheet. These orders and projects, with those parts that require capitalization, have to be settled to an asset under construction.

At the final settlement of the order/project, you must then settle to the completed asset

- from the order/project - the acquisitions in the current fiscal year requiring capitalization
- from the asset under construction - the acquisitions from closed fiscal years requiring capitalization.

CAUTION
At the present time you cannot post down payments to orders or projects.

It is possible to trace the origins of the capitalized asset back to the order/project, although not to the original line items of the order/project.

Other Posting Transactions

Down Payments to Assets Under Consructions

Post Capitalisation

Write - Ups

Transfer of Reserves

Forecasting Manual depreciation

Down Payments to Assets Under Consructions

Down payments represent a type of acquisition posting, which is indicated by a special transaction type. The following transactions should be posted in connection with the down payment:

- o posting of the down payment
- o posting of the corresponding closing invoice
- o clearing of the down payment with the closing invoice

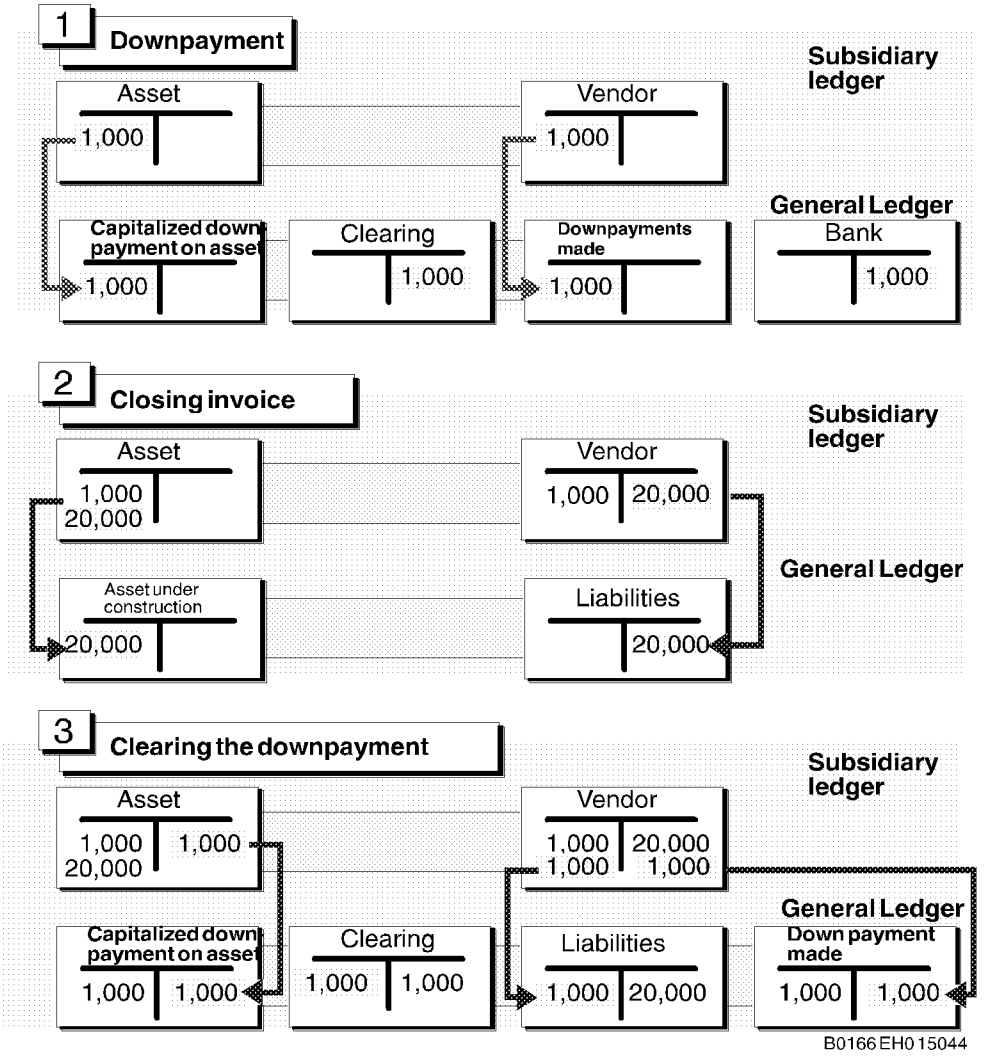


Fig. Down payments to asset under construction

Downpayment procedure

The R/3 FI System has specific transactions that allow for posting to the corresponding assets. You post the downpayment made to the reconciliation account for Asset Accounting "Capitalized downpayments to assets" as well as to the reconciliation account for Accounts Receivable "Downpayments made to assets." The contra account for the reconciliation account in Asset Accounting is a clearing account. In order to prevent the downpayment from appearing twice in the balance sheet, this clearing account must be linked to the same balance shet position as the

asset reconciliation account.

When the closing invoice is received, the downpayments can be posted in their entirety and capitalized to the asset. After this, you must clear the downpayments. When you clear the downpayment, the system reverses the original acquisitions (the downpayments) to the asset.

Capitalizing downpayments without closing invoice

If you want to start up an asset under construction at the year-end closing, you have to settle the asset under construction to a capitalized asset (see the topic Capitalizing Asset Under Construction). If the invoice receipt does not take place in the same year as the downpaymen year-end closing, you have to settle the asset under construction to a capitalized asset t, you are required to clear the open downpayments already made first. They must first be cleared with a forecasted invoice (reserve). The asset under construction can only be settled after this clearing.

Posting downpayments

Along with the capability for manually posting downpayments, the system lets you post downpayments with the posting program in Financial Accounting. The system then processes all the downpayment requests in the system that have come due.

Downpayments can only be posted for assets in specific asset classes. The determination of whether down payments can be posted is made when setting up the asset class. They are posted in the G/L accounts under "Acquisition Downpayments" and "Contra-account Acquisition Downpayments." If the component AM-IC (Investment Controlling) is in use, you can manage downpayments made in the form of open items.

CAUTION
If depreciation areas are handled in foreign currencies, you are required to post down payments and clearing of down payments using special FI transactions. Otherwise, differences due to the exchange rate can arise when the asset under construction is capitalized.

Old assets data takeover

If you do not implement Asset Accounting and Accounts Payable at the same time, you have to transfer open downpayments separately from your old system. The result is that there is then no link between the corresponding liability in Accounts Payable and the capitalization of the asset under construction in Asset Accounting. Therefore, it is not possible to automatically clear the downpayments posted to an asset. However, it is possible to sidestep this restriction. There are two different situations that can occur:

- **Vendors were taken over before assets**
  When you take over downpayments made using the old data takeover transaction, line items are created only in Asset Accounting. You have the following options:
  - **Reversing the existing downpayments before the old data takeover**
    Create all the downpayments from fiscal years before the year of the takeover using the Asset Accounting old data takeover transaction (transaction type 910). For old data takeover during the fiscal year, do not create any downpayments for downpayments made between the beginning of the fiscal year and the date of the takeover. Then reverse **all** downpayments to assets under construction from the Accounts Payable perspective. Post the downpayments again, **with** account assignment to assets. The downpayments from fiscal years before the old data takeover are then posted twice to the asset (once from the old data takeover, and once from the extra posting). Therefore, you need to post reversals for the same amount again, using transaction type 181.
    It is necessary to post and reverse twice, in order for the system to later distinguish between downpayments in the current fiscal year and downpayments from previous fiscal years when the asset under construction is settled.

- **Manual clearing on the assets side when the closing invoice is posted**

  If you transferred the downpayments on the assets side (independently of the A/P posting) using the normal old asset data takeover transaction, you have to clear the downpayment manually in Asset Accounting *Postings -> Miscellaneous / Transaction type 181).* You must carry out this clearing after the clearing of the downpayment in Accounts Payable with the closing invoice. Enter "Contra-account Acquisition downpayment" as the contra account.

o **Assets were taken over before the vendors**

During the takeover of downpayments within the framework of the old data takeover in Accounts Payable, the downpayments are posted with account assignment to assets. Therefore, additional downpayment postings are created for the assets. You therefore have reverse the same amount for the assets.

If the original downpayment stems from a closed fiscal year, you have to post the reversal uing transaction type 185. Otherwise you can post the reversal in the same year as the original downpayment using the transaction type 181.

Post Capitalization

Post-capitalizations represent corrections of the acquisition and production costs of a fixed asset to be carried out later. Such a correction is to be carried out if, in the closed fiscal year, you neglected to add expenditures and costs linked with the acquisition or assembly of the fixed asset to the acquisition and production costs.

Gross/net method

The system offers the possibility of posting post-capitalization gross or net. In both cases, you must determine the historical depreciation in closed fiscal years for post-capitalization before posting.

- If you want to post gross, that is, by specifying the historical depreciation amounts, you can enter the historical depreciation for each depreciation area in which posting is to be carried out and for each depreciation type.
- If you want to post net, that is, you have already reduced the posting amount by the historical depreciation, you can also carry out the posting without the entry of historical depreciation values.

Perform post-capitalization posting using a transaction type from group "40". It is recommended that you use the beginning of the current fiscal year as the asset value date. The system can then automatically determine the depreciation from the current fiscal year, making it unnecessary to enter this value manually. The system uses the capitalization date of the asset being posted as the depreciation start date.

Post-capitalization is displayed separately to acquisitions so that the acquisition list does not give false information on the investment in the fiscal year.

Post-capitalization on new master records

You need to create a new asset main number or sub-number for post-capitalization in the following instances:

- You did not capitalize an entire fixed asset.
- The part of the asset that needs capitalization cannot be posted to an already existing asset, because you want the post-capitalization to have a different depreciation start date from the main asset.

If you have to create a new master record for post-capitalization, proceed as follows:

- Create the new master record using the special master record transaction for post-capitalization. This transaction allows you to enter a historical capitalization date.
- Post the post-capitalization to the newly created asset.

Necessary accounts

In order to be able to carry out post-capitalization, you must enter the following accounts for the depreciation in which automatic posting is to be carried out:

- Incoming acquistion and production costs
- Offsetting account incoming acquisition value
- Accounts for the accumulated depreciation entries (the accounts needed for this follow from the depreciation types defined for the area in which posting is carried out).

Write - Ups

Write-ups are used for correcting past depreciation. They are necessary if an injustifiably high depreciation amount was posted to a fixed asset.Excessive depreciation generally results from the use of incorrect depreciation terms (incorrect expected useful life, incorrect depreciation key) or from partial-value depreciation, which is no longer valid in the current situation.

Write-ups can be posted to:

- ordinary depreciation
- special depreciation
- unplanned depreciation (= partial depreciation)
- manual depreciation (example.: 6B reserves)

Write-ups increase the book value of a fixed asset. When used with a depreciation method based on the net book value, write-ups increase the planned depreciation.

Transaction types

The standard version has transaction types that allow you to post write-ups to each of these depreciation types (transaction type group "70"). You can determine in this case via the transaction type whether all depreciation areas are affected or only some of the areas. Furthermore, there are transaction types that allow a simultaneous posting of write-ups to ordinary and special depreciation.

Necessary accounts

Please note that for every area for which asset values are to be posted automatically to the General Ledger and for every depreciation type that the area manages, entries are made in the corresponding accumulated depreciation account as well as the corresponding offset account.

Asset history sheet - fiscal year change

Write-ups are displayed separately on the asset history sheets. During a fiscal year change, the write-ups accumulated until the year-end are balanced with the depreciation amounts.

Transfer of Reserves

When you handle the transferred reserves on the liabilties side in a derived depreciation area, then you do not post to the accounts specified above. Instead you post to the appropriate accounts for the handling of special reserves (see the topic Possible Configurations for Special Valuations).

When you handle the reserves on the libilities side, the required amortization of the reserves transferred to an asset takes place automatically during the periodic depreciation posting run. The system posts to the appropriate accounts for the amortization of special reserves.

Forecasting Manual depreciation

As a rule, the system automatically determines the planned depreciation for the current fiscal year by means of the depreciation keys entered in the master record. If the person handling depreciation has to set the depreciation manually, the system offers a manual depreciation forecasting option. This means you can manually increase the planned values managed for the asset. In principle, you can generate manual depreciation amounts for all depreciation types, but it is more common to generate unplanned depreciation and transfer of reserves manually.

Posting manual depreciation

In order to forecast manual depreciation, you can use the standard posting transactions from Asset Accounting. The system provides special transaction types that enable you to forecast depreciation in relation to specific areas, or for all areas that use the corresponding depreciation type in one stroke.

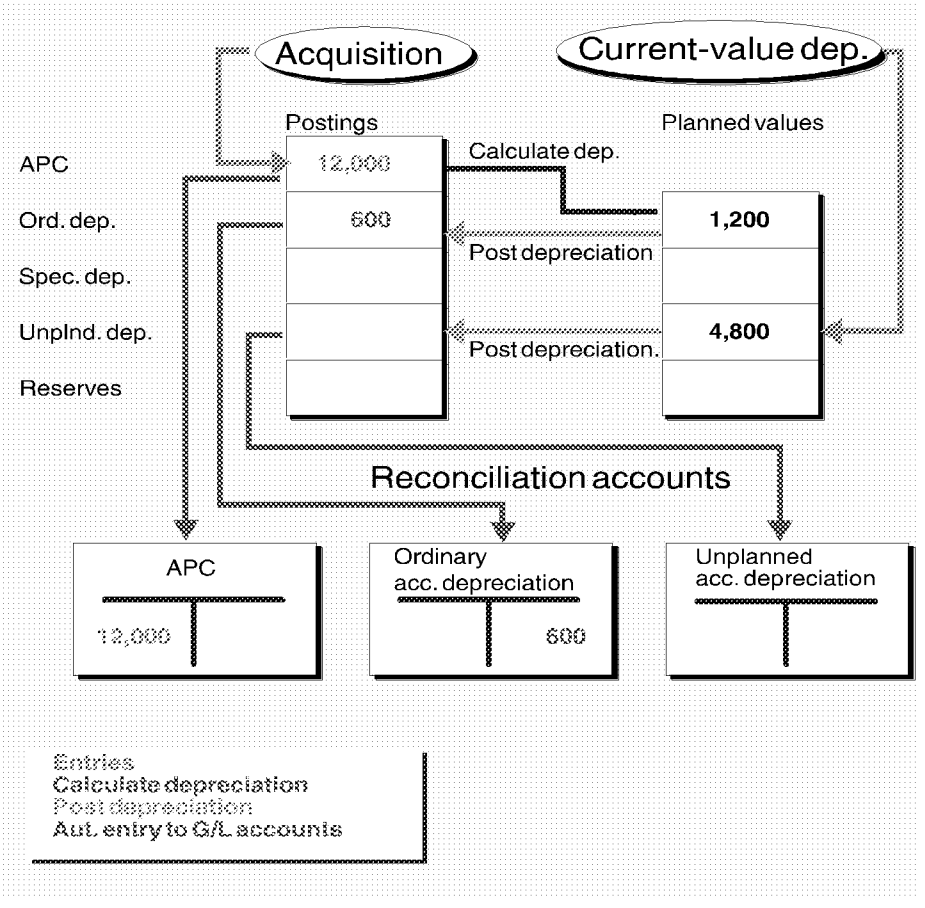


Fig. Manual Depreciation

The G/L accounts in Financial Accounting are not yet affected by this posting transaction. Asset line items are created, but no FI posting documents. The General Ledger accounts are updated, and the corresponding FI documents are created for the first time by the periodic depreciation posting run. The system then determines the depreciation to be posted up to a specific period, and creates the accompanying posting documents.

The following can be forecast manually:

- ordinary depreciation
- special depreciation
- unplanned depreciation (current-value depreciation)
- manual depreciation (surplus reserves)

Valuation

A standard report is available for the valuation of depreciation in a fiscal year. This report determines the corresponding line items for each asset and depreciation area.

Old Assets Data Takeover

The takeover of data from a previous system is generally the first productive action after configuration and asset classification. Basically, you have the option of automatic takeover from an old system by batch input or manual entry of the data with a special old data transaction.

If you want to perform automatic old assets data takeover, you must first check which of the R/3 AM System fields can be provided with data from the old system and which of the fields must be manually maintained. You have several options for the takeover of asset values. Of special interest is the fact that you can have the system recalculate cumulative past depreciation for depreciation areas in the R/3 AM System which were not managed in the old system.

The options and procedures for old assets data takeover are explained in the following:

Time of Takeover

Takeover Options

Takeover Procedure

The Batch Input Interface RAALTD01

Direct Data Transfer

Important Special Features of Takeover

Time of Takeover

Choosing the takeover date

The takeover date is the cut-off point in time for the transfer of old assets data from the previous system. This date represents the status of posting that is effective for the transfer of old data. The transfer will only include data up to this point in time. There are two possibilities:

- The takeover date can be in the fiscal year that directly follows the last closed fiscal year. This is called "takeover during the fiscal year."
- The takeover date can be the end of the last closed fiscal year.

You determine which of these alternatives you want to use by setting the takeover date in the asset company code definition. Remember that the takeover date generally is not the same as the date for the physical transfer of data. The consequences of the this difference will be explained later in more detail.

The takeover date is in the fiscal year directly following the last closed fiscal year (takeover during the fiscal year)

Along with the general master data, you must also transfer the following values:

- **Cumulative values**
  Transfer the cumulative values as they stood at the end of the the last closed fiscal year.
- **Depreciation posted**
  Include the depreciation posted since the end of the last closed fiscal year up to the date of takeover. To assist in this procedure, there are fields in Customizing for entering the last period that was posted before the takeover date. You enter this information for each depreciation area in Customizing, along with the other entries for the takeover. If you do not want to transfer depreciation posted in the old system, you have an alternative. After the takeover of data from the old sytem, you can "catch up" the posting of depreciation by carrying out an unplanned depreciation posting run. This posting run will "catch up" all depreciation in the current fiscal year up to the date of the takeover (see the topic Posting Depreciation).
- **Transactions**
  When entering old assets data in the SAP System, you can include the transactions from the end of the last closed fiscal year up to the date of takeover. You should be aware, however, that entering these transactions does not result in any updating of Financial Accounting. When transferring the balances for the G/L accounts, therefore, you must transfer the balances as they stand on the date of takeover (Asset Customizing: *Tools -> Productive start -> Balance takeover*).

  Instead of entering the transactions along with the master records, you can enter the master records without transactions, and post the transactions afterward in the SAP System. If you use this method, the G/L accounts are automatically posted in the background. In this case, you should transfer the balances of the G/L accounts as they stand at the end of the last closed fiscal year.

  Any transactions to old assets data that have a value date after the takeover date, but before the date of the physical transfer of data, must be posted separately in the SAP System in any case.

Example:

- Current fiscal year YYYY
- Last closed fiscal year YYYY - 1
- End of the last closed fiscal year 12/31/YYYY - 1
- Date of takeover 09/30/YYYY

Include the cumulative values as of 12/31/YYYY - 1, the depreciation posted in the year YYYY up to 09/30/YYYY, and the transactions from 01/01/YYYY to 09/30/YYYY in the old data takeover transaction. Balance takeover as of 09/30/YYYY.

The takeover date is the end of the last closed fiscal year

In this case, you do not need to include any depreciation posted or transactions in the transfer of old data. You only need to transfer master data and the cumulative values as of the end of the last closed fiscal year. The balance takeover also should take place as of this date.

Special considerations if SAP-FI Financial Accounting is already active

If SAP-FI Financial Accounting is already active, then all asset accounts and value adjustment accounts already have the correct status. Therefore, no balance takeover is necessary for G/L accounts. Up until the takeover date (the date that you chose as the cut-off point for the transfer of old data; data is transferred with the status determined by this date) assets are managed in the non-SAP system. Asset postings are made to Financial Accounting in the SAP-FI System, and are managed parallel to this in the other system.

After the takeover date, you can create and post to new assets in the SAP System. However, you must re-define all asset accounts and value adjustment accounts for automatic posting from Asset Accounting (Asset Customizing: *Tools -> Productive start -> Change reconciliation accounts*). After the takeover date, you can no longer post directly to these accounts.

Difficulties can arise if you have old assets data, that was posted in the time period between the takeover date and the physical transfer of data, and has a value date that lies before the takeover date. These transactions must be recorded in the SAP System in FI, and must also be recorded in the old system. However, such transactions can no longer be posted in FI, since the asset accounts and value adjustment accounts can no longer be posted to directly! Therefore, you should create parallel accounts that can be posted to directly. These parallel accounts can then temporarily take on the role of the respective asset and value adjustment accounts. Once the actual (physical) transfer of the old data into the SAP System takes place, you can reconcile these accounts to the original asset and value adjustment accounts. You can carry this out using balance takeover in Asset Customizing *Tools -> Productive start -> Balance takeover*.

Takeover Options

During the transfer of fixed assets from the previous system, you have the following one-time options per company code and depreciation area:

- **Calculating accumulated depreciation**
  If you want to manage a new depreciation area, you can calculate past depreciation based on the depreciation terms in the SAP System, but only if the total acquisition value was posted at the time of the capitalization. Naturally, calculating past depreciation is only possible in the book depreciation area for company codes that are still in test operation.

- **Calculating replacement values**
  If you want a depreciation area to manage replacement values, starting from the takeover date, the program can also calculate this value. The assumption, of course, is that the total acquisition value was posted at the time of capitalization.

- **Calculating the base insurable value**
  The system can likewise determine a base insurable value at the takeover date, if one does not already exist.

- **Entry of the net book value**
  If net book values are available in the previous system instead of depreciation values, you can enter these instead of the ordinary depreciation. The ordinary depreciation amount is then calculated as a difference between the acquisition value, the net book value and the further depreciation values (for example, special depreciation). You should be aware that the cumulative special depreciation may be required in order to correctly calculate the accumulated ordinary depreciation.

  Caution
  *If you use the batch input interface RAALTD01, **no** net book values can be transferred (see the topic The Batch Input Interface RAALTD01).*

Takeover Procedure

This is the procedure for old assets data takeover:

1. First determine the sequence in which the depreciation areas are to be supplied with values. You make this specification in Customizing for the asset company codes *(Valuation -> Asset company code -> Takeover old data).* It makes sense to arrange the areas so that those areas with values to be entered manually appear first on the screen. Then specify the takeover date and the takeover options for each depreciation area (in the detail display).
2. Enter the last closed fiscal year in the depreciation area specifications for the company code *(Valuation -> Asset company code -> Depreciation areas).*
3. If you are using a year-dependent fiscal year version, for all historical fiscal years from the year of capitalization for the oldest asset minus 1 up to the current fiscal year, you have to
   - maintain the calendar date allocations for the fiscal year version *(FI Customizing: Environment)*
   - generate the depreciation period controls for Asset Accounting *(Periodic processing).*
4. After this, you can either manually enter the old assets in the system via special master record transactions, or use the batch input interface (under "Tools" in the Asset Customizing menu - see the topic The Batch Input Interface RAALTD01).

   For each asset you must transfer the following data:
   - the historical capitalization date
   - the general master data and organizational allocations
   - the depreciation terms (for example, the depreciation key)
   - the cumulative values from the last closed fiscal year
   - the transactions in the current fiscal year (for old data takeover "during the fiscal year.")
5. Complete the takeover by comparing the values in the previous system with the values in SAP Asset Acounting. For this comparison, you can use the balance list from Financial Accounting (RFSSLD01) and the asset history sheet (RAGITT01).
6. After this, you must block old assets data takeover transactions. You block them at the company code level, since you might be transferring old data for different company codes at different points in time.
7. The following status settings are possible:
   - The company code is in test operation (takeover of old assets data is allowed at any time, also parallel to transactions).
   - Takeover of old assets data is not yet finished (asset transactions are not possible).
   - Takeover of old assets data is finished (asset transactions are possible).

Test takeover

When the takeover date is 12/31/YYYY - 1, the earliest you can transfer old assets data is on 01/01/YYYY. However, if you want to test the transfer before the actual takeover, set the takeover date to 12/31/YYYY - 2. Then you can nonetheless transfer the data from the fiscal year YYYY - 1. Delete this data after the completion of the test (Asset Customizing: *Tools -> Productive start -> Reset company codes*).

Takeover transaction

The transaction for taking over old data from a previous system is the same as the master data transaction in regard to the general information for the asset. The takeover transaction, however, also includes functions for taking over both the cumulative values and the the transactions in the current fiscal year for the asset.

Master data

When creating master data for an asset from a previous system, you should be aware of the following special concerns:

- The capitalization date (first master data screen) is always a required entry. Using the capitalization date, the system determines the depreciation start date and the expired useful life, based on the period control in the depreciation key.
- The planned useful life (in the value entry screen) is a required entry when a depreciation key has been entered. If, however, the asset was acquired at a time when the company code had a different fiscal year version, this determination of the useful life will be correct only if the periodic allocations have been maintained historically. You can also account for increased wear and tear on an asset in the past as the result of multiple shift use. You do this by manually correcting the expired useful life that was automatically calculated by the system.
- Time dependent data (such as the assignment to a cost center) can only be taken over with the values current at the time of the takeover. The system then automatically creates the time interval "date of the takeover to 9999." To create new time intervals, you have to use the (old)master data change transaction.

Asset values

You should keep the following special considerations in mind when taking over values for assets from your previous system:

- You must take all active depreciation areas for the asset into account, and enter the historical acquisition costs.
- If you do not use the function for automatically calculating past depreciation *(Asset Customizing)*, you must manually enter the depreciation that has already been calculated.
- If you take over old data during the course of the fiscal year, you can enter the depreciation posted in the current fiscal year.

The system takes into account the value takeover rules that have been defined in the depreciation areas, just as it does for normal posting. The values you enter are also checked against the defined calculation rules in the depreciation areas.

Transactions

If you take over old data during the course of the fiscal year, you can transfer the transactions from the current fiscal year up to the date of the takeover. Keep the following in mind when working with these transactions:

- Enter the posting date, the transaction type and the posting amount.
- If you selected the option "automatic calculation of accumulated depreciation" for the old data takeover *(Asset Customizing),* then the system automatically calculates proportional depreciation. For this purpose, the system uses the capitalization date of the asset as the depreciation start date for all line items, and calculates the accumulated depreciation according to the depreciation key in the asset master record.
- If you do **not** use the option for the automatic calculation of depreciation, you can enter the accumulated proportional depreciation for past fiscal years for each transaction and depreciation area.

Caution
Write-ups, and other transactions that only affect certain depreciation areas, cannot be included using the old data takeover transaction. You must manually re-post them using the applicable posting transactions. This also means that you cannot transfer any old assets that manage only write-ups, with no acquisition costs.

Balances of the reconciliation accounts

The transfer of old data using the old data takeover transaction has no effect on the balances of the corresponding reconciliation accounts in Financial Accounting. This means that there is no automatic creation and reconcilation of balances. You must correct the balances of these accounts manually. You can determine the Asset Accounting values using the asset list report. Start this report using January 1 of the current fiscal year as the report date. The system then provides the same data as on December 31 of the previous year. (That is, no data from the current fiscal year is included.) You can carry out any necessary corrections to the reconciliation accounts with the help of a special posting transaction (see the topic in the System Administration Guide Important Special Features of Takeover)

Takeover of assets under construction

You can also use the old data takeover transaction for transferring assets under construction with line item management. The indicator for line item management must be set in the asset class in order for this to take place. Enter the open items (acquisitions, downpayments) as transactions. Special transaction types (900, 910) exist for this purpose. You cannot take over the historical asset value date of the transaction. The only date which can be used is the first day following the close of the fiscal year preceding the old data takeover.

The Batch Input Interface RAALTD01

With the program *RAALTD01*, you can transfer asset master data and asset transactions from the current fiscal year into the AM System. The program provides the transactions for old assets data takeover with the data from your previous system. Incorrect data records are witten to a separate batch input session. From there they can be manually corrected.

You will also find this program in the Asset Customizing menu under *Tools -> Asset Takeover -> Assets*.

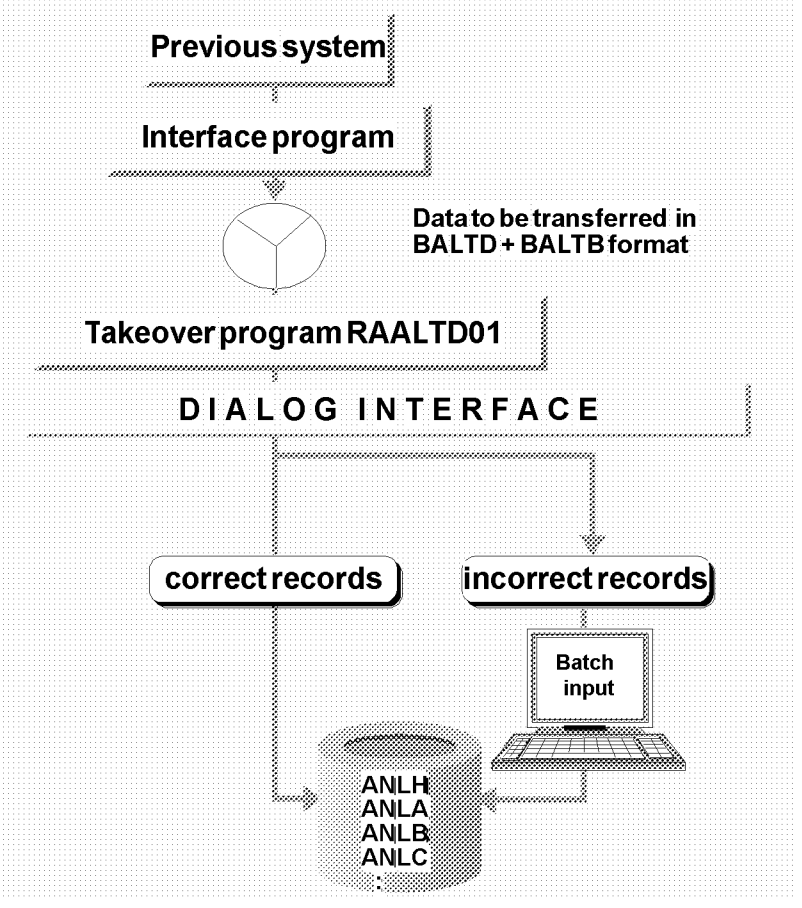


Fig. Batch input interface

Description of the transfer format BALTD (Master data)

The master data to be transferred must be in a sequential input file and must be structured according to the Dictionary table **BALTD**:

| Key | Master data | Area-01 | ... | Area-08 |

You can see the exact structure of the transfer record by running the program RAALTD01 with the parameter set for "Structure of the transfer format." You can create a record layout for this data record with the programming languages COBOL, C, ASSEMBLER and PL1 in the Asset Customizing menu under the menu option *Tools*.

The individual record parts have the following meaning:

- **Key**
  The key consists of the fields

- MANDT (client),
- BUKRS (company code),
- ANLKL (asset class),
- OLDN1 (old asset main number),
- OLDN2 (old asset sub-number),
- TCODE (accessed transaction).
- RCTYP (record type)

For master data you should always enter the record type **A**. In the field *TCODE* you must specify the transaction for which batch input should be created:

- AS91 (add old asset)
- AS92 (change old asset)
- AS94 (create sub-number for old asset)

o **Master data**
The fields of the asset master record which are independent of the depreciation areas are in the general asset master data. In particular you should specify the main number and the sub-number of the new asset master record here, if you provided for external number assignment in the specified number range or in the asset class.

Enter the number of transactions that should be transferred with the asset in the field BWCNT. The use of this field will be explained later in greater detail.

Transfer investment keys into the fields INVSL01, INVSL02,... and so on.

o **Area-01 to area-08**

The fields of the block for area-nn can be recognized by the suffix "nn" in the field name. They contain the entries to be transferred for the depreciation area into the field AFABEnn, that is

- depreciation terms and
- transferred values.

The sequence of the fields is identical in every area-nn.

Modification of the transfer format *BALTD*

The transfer format *BALTD* is provided as a default, but it is a starting point which can be modified.

o **Modification of the master data block**
Here you can delete unnecessary fields or add additional fields. When adding fields, however, you must make sure that a corresponding Dynpro field exists in the takeover transacation for the field being added. (If necessary, modify a Dynpro.) You must use the name root of the the corresponding table field as the name root for the new field.

o **Increasing the fields INVSLnn**
In the standard system, two fields, INVSL01 and INVSL02, are foreseen for the transfer of investment keys. However, up to 99 fields are possible in principle. If you need more fields, you simply need to add them to the Data Dictionary table *BALTD*. You must add these fields after the field INVSL02, and name them INVSL03, INVSL04,... and so on.

o **Increase/reduction of the blocks "Area-nn"**
The number of the 8 blocks area-01 to area-08 is a default. You can transfer a maximum of up to 99 such blocks. When increasing the number of these blocks, you should bear in mind two rules.

- The setup of the blocks (fields and their sequence) must always be the same.
- The number sequence of the blocks, starting with 01, must be continuous and unbroken (contiguous), and the fields of the area "nn" must also all carry the suffix "nn".

In both cases of modification, you do *not* need to adapt the conversion program *RAALTD01*.

Description of the transfer format BALTB (Transactions)

The transactions to be taken over must be structured according to the Data Dictionary table *BALTB*:

| Key | Transaction data | Amount 01 | ... | Amount 08 |

You can generate a record layout for this format as well, using various programming languages, and display it using the program *RAALTD01*.

The individual record parts have the following meanings:

o **Key**
The Key consists of the fields:
- MANDT (client)
- BUKRS (company code)
- ANLKL (asset class)
- OLDN1 (old asset main number)
- OLDN2 (old asset sub-number)
- TCODE (accessed transaction)
- RCTYP (record type)

For transactions always enter the record type **B**.

o **Transaction data**
The general transaction data consists only of the two fields:
- BWASL (Transaction Type)
- BZDAT (Asset vaue date)

o **Amount 01 to amount 08**
Amounts belonging to the depreciation areas AFABEnn are transferred to the fields ANBTRnn. If you set up certain depreciation areas in asset customizing so that they take over posting values from another depreciation area, these values do not need to be repeated here unless they differ from the amounts in the area from which they take over values.
Example: The depreciation area **01** is managed in the block for area 01, and area **20** is managed in the block for area 03, (this means that BALTD-AFABE01 = **01** and BALTD-AFABE03 = **20**). If area **20** takes over its posting values from area **01**, then you only need to transfer values for the field ANBTR03 if you want the values in area **20** to be different from the values in area **01**.

Modification of the transfer format *BALTB*

You only need to adapt the delivered transfer program *BALTB* if you changed the number of blocks for area-nn in the transfer format *BALTD*. If this is the case, you must correspondingly increase or decrease the fields ANBTRnn.

Field types

The fields of the transfer record are all of the type CHAR or DATS.

- **CHAR (Character)**
  Fields of this type can be completed with the same content that would be used with a corresponding on-line entry. In particular, all value fields for the type CHAR have 16 places, so that you can transfer 10000 as '10000' or '10,000' or '10,000.00'. In the same way, a useful life of 3 years can be transferred as '3', '03' or '003'.
- **DATS (Date)**
  All date fields are of the type DATS. They must be completed according to the format yyyymmdd (that is, *not* according to the format for online entries).

Rules for setting up the input file

There are certain rules for creating the input file that *must* be observed. These rules are cited below.

- **Identification of fields not to be transferred**
  There may be fields that should not be transferred (for example, because they are to be supplied with a default value from the sample master record, or because they should remain empty). You must mark any such fields with the character / in the first position. If, for example, the depreciation key in area 01 is not to be transferred exactly, enter / in AFASL01.

  If the program for setting up the input file is an ABAP program, you can use an 'Include' to help initialize the fields for batch input. The 'Include' RAALTDI0 contains the form routine BALTD_INIT. This form routine creates a record in BALTD format that contains a / in the first position of BALTD fields, in other words, a sort of "initial record layout" for batch input. For performance reasons, the form routine should not be called up for every record to be taken over during the transfer program. Instead, you should create this "initial record layout" once, and then keep it available in a help structure (in the example, it is the structure I-BALTD). Below is an example of how this could look:

  Transfer program

  ...

  TABLES: BALTD.

  DATA: BEGIN OF I-BALTD.
  INCLUDE STRUCTURE BALTD.
  DATA: END OF I-BALTD.

  ...

  PERFORM BALTD_INIT USING I-BALTD.

  ...

  INCLUDE RAALTDI0.

  ...
  You do *not* have to adapt the 'Include' RAALTDI0 if changes are made to the table BALTD in the Data Dictionary.

- **Handling of the key**
  Enter the transaction, for which the batch input should be created, in the transaction code TCODE: AS91 (add old asset), AS92 (change old asset) or AS94 (create sub-number for old

asset).

Always enter the desired asset class in the field ANLKL, *even* when working with the transactions AS92 and AS94.

When working with the transaction AS92, enter the asset class for the asset to be changed in ANLKL. If you are adding a sub-number using AS94, enter the asset class for the corresponding asset main number.

If the asset class is numeric, you must transfer it using leading zeros:

- Asset class 1250 ==> BALTD-ANLKL = "00001250" but
- Asset class AIB ==> BALTD-ANLKL = "AIB ".

In the fields OLDN1 and OLDN2, specify the main number and sub-number of the asset in the old system. As long as you are not transferring any transactions, these fields are not actually necessary for the creation of the new asset master record. However, it makes sense to specify them for two reasons:

- In the case of errors, the asset can be identified using the numbers from the old system. This is the only way to clearly identify the assets listed in the error log. The numbers from the old system are particularly important in case of a termination of the transfer run. The numbers enable you to determine the record with which the run should be restarted.
- If the new asset numbers are to be assigned internally, this takes place in the sequence determined by the old numbers, since the input file must be sorted according to the key before the running of the transfer program.

Specify the record type in the field RCTYP:

- RCTYP = **A** for master data (transfer structure BALTD),
- RCTYP = **B** for transactions (transfer structure BALTB).

o **Special concerns regarding transfer of transactions**
If the date set in Customizing for the transfer of old data does not fall at the end of a fiscal year, you can also transfer acquisition transactions that have taken place since the beginning of the fiscal year. In this case you would transfer not only master data in the format BALTD, but also transaction data in the format BALTB.

- Record type: always set the record type BALTD-RCTYP = **A** and BALTB-RCTYP = **B**.
- Old asset numbers: In order to ensure the allocation of the transactions to specific assets, you *must* make sure that the fields BALTD-OLDN1, BALTD-OLDN2 are completed.
- Counter field for transactions: The field BALTD-BWCNT *must* always be completed and contain the exact (!) number of transferred transaction records for an old asset. For example, if two BALTB records were transferred for a particular asset, the field must be completed BALTD-BWCNT = **0002**. If there are no transactions at all transferred for a given asset, complete the field with **0000**.
- Transaction type: Since only acquisition transactions can be transferred, the field BALTB-BWASL can only be completed using acquisition transaction types.
- Asset value date: The asset value date BALTB-BZDAT must lie in the time period from the beginning of the fiscal year up to the date for transferring old data (as specified in Asset Customizing).
- *No* transactions can be transferred for the transaction AS92.

o **Sequence of the depreciation areas for old data transfer**
The following is only relevant if more than 4 depreciation areas are being transferred.

You can set up a special sequence, which applies only for the transfer of old data, for the order of the depreciation areas in the cumulative value screen and transaction screens of the transactions AS91, AS92 and AS94. You set up the sequences per company code in Asset Customizing. A maximum of 4 depreciation areas can be entered in the initial screens of these transactions. Therefore, for performance reasons, you should arrange the sequence so that

depreciation areas that do *not* take over values from other areas come first. Setting up the sequence in this way means that less scrolling is required in the old data transfer transaction, since those areas with the takeover option will directly take over values (either wholly or in part) from other areas.

- **Transfer of remaining book value**
  For technical reasons, it is **not** possible to transfer remaining book values using the batch input interface. If you nevertheless wish to transfer remaining book values from your old system, you must specially structure the interface program in the old system. You must set up the interface program so that it already calculates the accumulated depreciation as the difference between the acquisition value and the remaining book value. You can then transfer accumulated depreciation and acquisition costs into the SAP System.

- **Handling of the fields INVSLnn in the transfer structure BALTD for master data**
  If you work with investment support measures, you can transfer any that exist into the fields INVSL01, INVSL02,... and so forth. The investment keys can be entered in these fields in any order. However, you must begin with the field INVSL01, and follow in an unbroken sequence.

- **Completing the blocks for area-nn in the transfer structure BALTD for master data**
  It is particularly important to make sure that you only transfer fields in the transfer record that are available for input during the running of the transfer program. For example: the depreciation area specified in AFABE02 takes over its acquisition values from the depreciation area specified in AFABE01 (option "Identical acquisition values" in the definition of the depreciation area). Then the corresponding field for the cumulative acquisition value is not available for input using the transaction AS91. That is, the field KANSW02 cannot be transferred (the symbol '/' is in the first position of the field KANSW02, see above). It is therefore recommended that you run an online test for the transfer transaction per company code, asset class and transaction, in order to determine the fields that are actually available for input!

  When setting up the transfer record, you can ignore the sequence of the depreciation areas on the depreciation area/value screen of the transfer transaction. For example, area **20** can stand in AFABE01, even if area **20** is the 4th area to be supplied with values in the value screen.

  Caution
  The content of the field AFABEnn may not differ from one company code or asset class to another! This is especially important in the following cases:

  - *Within an asset class you can have assets both with and without investment keys. If the investment area is specified in AFABEnn, then AFABEnn must remain the same, even for assets that do not have investment keys, although nothing will be transferred into the other fields in the area-nn. If, for example, the investment area **51** is transferred in BALTD-AFABE04, then the field AFABE04 = **51** must also be set for assets without investment subsidies. However, all other fields in the the block for area-nn should contain a / in the first position.*
  - *The content of AFABEnn also has to remain constant if you wish to change fields using AS92, even if there are no fields from area-nn to be changed in the corresponding record.*

  In addition, you should observe the following rules when completing the blocks for area-01 to area-08:

  If the field AFABEnn = / is set, then the transfer program expects that no further fields are to be transferred for all following blocks for area-mm (where mm >= nn).

  In other words: The depreciation areas to be transferred must be transferred in a *consecutive*, unbroken sequence of blocks, starting with area-01. The contents of the fields AFABEnn must also remain constant in this instance (per company code and asset class), even if certain depreciation areas are not transferred for certain assets.

- **Completing the transfer structure BALTB for transactions**
  Only those transactions can be transferred that lie after the close of the last fiscal year and before the takeover date for old data. You can only transfer acquisition transactions. Retirements and transfers must be entered manually at a later point. It is important to keep this in mind when entering the transaction type. Acquisition transaction types can be recognized by the transaction type 1 in the transaction type group.

The transfer run (Test possibilities)

First create an input file from the data in your previous system. The data in this input file must correspond to the takeover transfer structure in the R/3 system (BALTD, BALTB). You can create an appropriate record layout for various programming languages *(Asset Customizing -> Tools -> Data takeover -> Generate record layout).* The actual transfer of old data into the SAP AM System is carried out by the program RAALTD01. Before a production run or test run of the program RAALTD01, you *must* carry out a preliminary sort of the transfer records according to the key. Provide the transfer program with the name of the file, in which the transfer records are stored (parameter "name of the input file").

Before the production run, first carry out a "test run without data base update," in order to identify and correct possible errors. You do not have to transfer the entire old asset data in order to do this. A test input file should contain a few representative records for each company code and asset class. When you start a run with the test option, the system creates an error log, but does not update the data base. For more extensive testing, you can actually transfer old data (without the test option), and then reset the values in the asset company code (Asset Customizing: *Tools -> Productive start -> Reset company code*).

After a successful test, you can start the production run. The transactions are then carried out in the background. If there are no errors found, posting takes place. If errors are found, the transactions with errors are placed in the batch input session under the name entered for "name of the error file." By running this session you can later work through the transactions with errors.

Statistics are created for every transfer run. In the case of errors, the first error that appears (for each asset) is logged. By selecting the logged error (F2), you can display the long text for the error message.

Serious comprehensive errors that cause a program termination are

- company code is initial in the input record
- asset class is initial in the input record
- the asset class requested is not defined in the configuration menu for asset accounting
- number range is missing
- transaction code is missing
- unexpected record type
  (not A or B)
- the number of fields for transactions (BALTD-BWCNT) is not numerical
- transactions with transaction code AS92
  (changing old data).

If no updates were made at this point in time, the result is a simple termination as a result of the error that appeared. Once the error is corrected, the transfer run can be restarted from the beginning.

If, however, assets were already processed and updates carried out at the point of the termination, the system generates a log about the data records already processed, as well as the cause of the termination. You must now be aware of two things:

- **Error session**

It is possible that records with errors already occurred before the termination. These are now recorded in the error session and must be reprocessed.

- **Repeat run**
  The key of the first data record that was not processed is displayed in the termination log. The cause of the termination has to be removed. You must create an input file that contains the corrected data records, starting with (and including) the record at which termination occurred. After this, the program can run via the newly created input file, that contains only those records that were not yet processed.

In the test run, as well as in the production run, you can process the transactions in the foreground using "Transaction flow in the foreground." In the test run, however, this only allows you to observe one transaction at a time. This occurs because no actual posting takes place, and the system therefore always stays on the last transaction screen.

Direct Data Transfer

You can use the report RAALTD11, rather than the old data takeover program RAALTD01, when you have a very large number of assets to transfer from your previous system. The program RAALTD11 provides for the quick transfer of a large amount of old data from the previous system. The program does not use batch input to complete the old data takeover tansactions. Instead it writes the old data directly to the respective tables. In comparison to the takeover program RAALTD01, this increases performance by at least 10 times.

Both programs basically accept the same input structure. However, there are certain restrictions that apply to the program RAALTD11:

- The takevoer date must be the end of the previous fiscal year or come after the end of the previous fiscal year.
- All value fields are allowed to contain only one decimal point, and all blank spaces must be filled with zeros. This makes it possible to avoid time-consuming data checks and conversions.
- The depreciation start date must be entered.

Checks

The following important input checks are carried out in this program:

- Valid capitalization date: The capitalization date must be before the takeover date.
- If the fields "cost center" and "business area" are defined as required fields in the screen layout, but no values are transferred for these fields, the program does not transfer these assets. Instead the program writes them to an error file. Otherwise the entries in these fields are checked for validity.

The screen layout control is taken into account dependent upon the maintenance level. If there are fields that are suppressed according to the screen layout, but should nonetheless be supplied with contents from the input structure, this does not lead to an error. However, the values are ignored. The asset is also transferred if there are conflicts witht the default values from the asset class. Records from the input file are only rejected if records would be duplicated in the data base, or if there are obvious errors in the key in the structure of the record.

Assets with errors

Assets with the following errors are rejected by the report:

- Errors in the control tables, such as currencies that are not maintained
- Errors that occur during the calculation of depreciation
- Conflicts in number assignment
- General errors, such as incorrect record types, or if the company code or transaction code is initial in the input record.

You can define your own additional checks with the help of the transaction CMOD "Project management of SAP enhancements" using the project "ALTD0001." This project makes it possible for you to carry out your own checks, such as checking the validity of evaluation groups.

It is imperative to carry out a preliminary sort of the takeover records according to the key for the input structure BALTD before a test run or a production run.

Caution
In principle, you should use the old data takeover program RAALTD01 for transferring old data, because it provides a more secure transfer of data. In any case, it is recommended that you carry out sample checks of the input file using RAALTD01, to check for the correct record structure and logic. After this check, you can use the program RAALTD11.

Important Special Features of Takeover

Some special considerations are listed below that you should take into account during the old assets data takeover:

Past depreciation too low

If the old system calculated depreciation that was too low, and the expected useful life of the fixed asset has already expired without the net book value reaching zero, you must choose an appropriate changeover key in order to ensure complete depreciation.

It may be necessary to define a new depreciation key for this.

Definition of the reconciliation accounts

You are not allowed to manually post to the reconciliation accounts for Asset Accounting in Financial Accounting. Normally, you can designate the corresponding General Ledger accounts in Financial Accounting as reconciliation accounts. This change, however, can no longer be made in Financial Accounting, once the affected accounts already carry balances from the old data takeover. However, you can use the report RACKONT2 to assign these accounts in Financial Accounting the status of reconcilation accounts, and then check the plausibility of the account allocation in Asset Accounting. You find this report in Asset Customizing under *Tools -> Productive start -> Change reconciliation accounts*.

Subsequent correction postings to reconciliation accounts

Suppose you have already defined the asset General Ledger accounts in Financial Accounting as reconciliation accounts, but still need to transfer balances to these accounts, or make corrections. You can perform correction postings to these reconciliation accounts with a special posting transaction in Asset Customizing (*Tools -> Productive start -> Balance takeover*), using posting key 40 or 50. You can only carry out postings for those assets in a company code with implementation status.

Takeover of investment support measures that are already implemented

You must define every investment support measure that you want to implement in the R/3 System in Asset Customizing. It is particularly important to specify there the depreciation area in which the investment support measure should be managed (see the topic Investment Support Measures). The system automatically sets the support amount in all the relevant depreciation areas when you post the implementation of the measure.

If you want to take over support amounts within the framework of the old data takeover, you first have to define the investment support measures in the system. However, at the time of the actual transfer of data, you have to set the support amount in the depreciation areas yourself. You need to do this for all depreciation areas that manage investment support measures, according to their definition in Asset Customizing.

Planned depreciation

Differences can arise, in the fiscal years following the last closed fiscal year, between the planned depreciation in the previous system and in the SAP System.

Increased depreciation due to multiple-shift use

You can account for increased wear and tear on the asset in the past due to multiple-shift use by

entering a multiple-shift factor in the asset master record (see the topic Depreciation for Multiple - shift Operation and Closure). If you have selected the takeover option "Calculation of accumulated depreciation," the system then automatically determines the increased accumulated depreciation amounts. However, you cannot enter individual time intervals when entering the time-dependent data for an old asset. Therefore, it is not possible to enter more than one historical shift factor for each asset.

If you do not re-calculate accumulated depreciation during the old data takeover, you can still calculate increased wear and tear on the asset. You do this by correcting the automatically calculated expired useful life.

Periodic Processing

Almost all functions in the AM System process data online. However, for some periodically recurring processing it is recommended to use the batch session. It differs from online in that no dialog takes place if irregularities occur, but the errors are issued collectively in an error list.

The most important batch processing procedures in the system are displayed below:

Fiscal Year Change

Year - end Closing

Recalculating Depreciation

Posting Depreciation (general)

System Configuration for Posting Depreciation

Creating a Batch - Input Session for Posting Depreciation

Handling of Errors with Posting Depreciation

Primary Cost Planning

Other Periodic Processing

Fiscal Year Change

From the point of view of the system, a fiscal year change (RAJAWE00 *Periodic processing*) is the opening of a new fiscal year for a company code. At the fiscal year change, the asset values from the previous fiscal year are carried forward cumulatively into the new fiscal year. Once the fiscal year change takes place, you can post to assets using value dates in the new fiscal year. At the same time, you can continue to post in the previous fiscal year. The previous fiscal year is closed by running the year-end closing program (RAJABS00).

You can only carry out a fiscal year change (also in test mode) for a new fiscal year. You can only open a new fiscal year for the fiscal year that directly follows the current fiscal year. The earliest that you can open the new fiscal year is the last month of the old fiscal year. You can choose any point in the new fiscal year for carrying out the year-end closing.

If you have not carried out a fiscal year change, and you nonetheless post a transaction in the new fiscal year, the system automatically carries out a fiscal year change for the asset in question. If the fiscal year change has been made, and you post in the old fiscal year, the system automatically corrects the values for the asset in the current fiscal year and in the previous fiscal year.

You can carry out a fiscal year change only once in productive mode. The system carries out the fiscal year change for all assets, even if the assets have errors. You can access a long text for the error messages that appear. The system provides statistics for the assets that have been changed.

Year - end Closing

You use the program RAJABS00 to close the fiscal year for one or more company codes from an accounting perspective. Once the fiscal year is closed, you can no longer post or change values within Asset Accounting (for example, by recalculating depreciation). The fiscal year that is closed is always the year following the last closed fiscal year. You cannot close the current fiscal year.

Example(non-calendar fiscal year is not being used)

current fiscal year (current date): March 19xx
last closed fiscal year: 19xx - 2
=> you can close the fiscal year 19xx - 1

The system only closes a fiscal year in a company code if

- the system has calculated depreciation for all periods in a fiscal year and for all capitalized assets within a company code
- the planned depreciation from the automatic posting area has been completely posted to the General Ledger
- the balances from depreciation areas that are posted periodically have been completely posted to the General Ledger
- all assets acquired in the fiscal year have already been capitalized.
  You can prevent this check from being made for assets under construction by means of the asset class. If the asset concerned is not an asset under construction, you must transfer the asset.

The system creates a work list of assets with errors for any assets that do not meet the above requirements. The work list also shows the reason for the errors.

If you need to make adjustments in a closed fiscal year, you can reset the last closed fiscal year in Asset Customizing *(Valuation -> Asset company code -> Depreciation area)*

You will find detailed information on the procedures for year-end closing for Asset Accounting in the Asset Management User Manual.

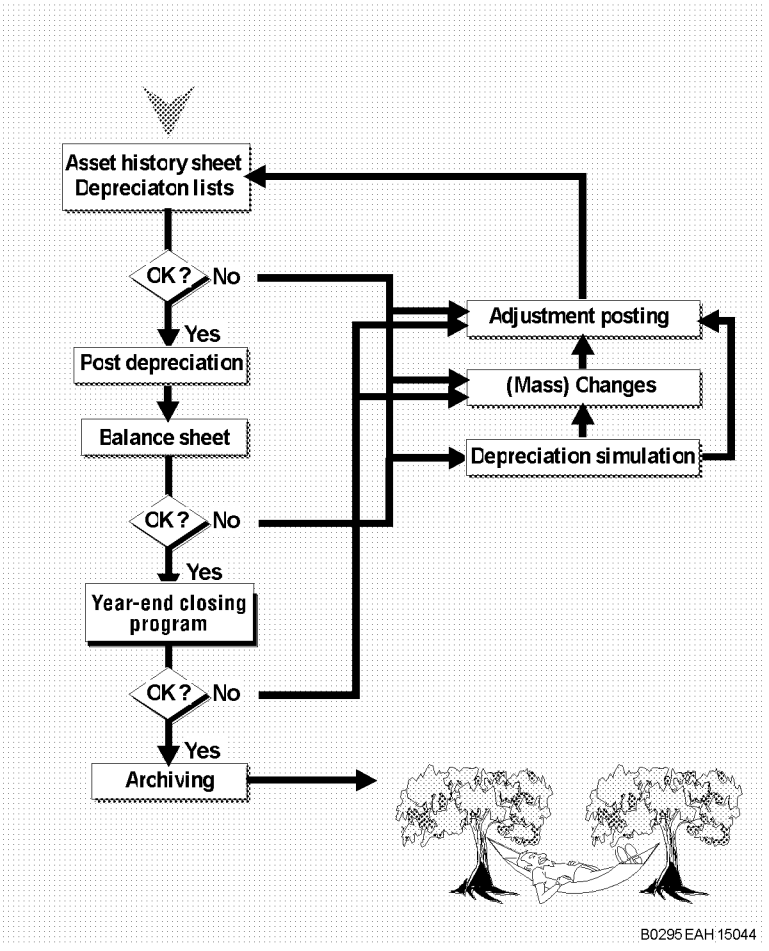


Fig. Year - end closing

Recalculating Depreciation

Unter folgenden Umständen kann es erforderlich sein, die geplante Jahresabschreibung in bestimmten Buchungskreisen oder für einzelne Anlagen neu rechnen zu lassen:

- Sie haben Abschreibungsschlüssel verändert.
- Sie haben selbstprogrammierte Massenänderungen vorgenommen, durch die abschreibungsrelevante Daten verändert wurden.
- Sie möchten nachträglich (nach abgeschlossener Altdatenübernahme) Aufwertungen mit aktuellen Indexzahlen rechnen lassen. Für das korrekte Errechnen der Wiederbeschaffungswerte, dürfen Sie dann jedoch nur Indexreihen mit historischem Rechnen verwenden.

Das Programm RAAFAR00 ermöglicht Ihnen die geplante Jahresabschreibung mit den zum Zeitpunkt des Programmstartes gültigen Abschreibungsparametern neu zu berechnen (auch im Testmodus). Sie können die geplante Abschreibung allerdings nur für noch offene Geschäftsjahre neu rechnen lassen.

Nachdem die geplante Jahresabschreibung neu ermittelt wurde, erzeugt das System ein statistisches Protokoll mit der Anzahl der insgesamt und der fehlerhaft bearbeiteten Anlagen. Mit Hilfe der Transaktion für das Anzeigen der Anlagenwerte können Sie die auftretenden Fehlberechnungen kontrollieren.

Das AfA-Buchungsprogramm korrigiert die noch zu buchende Periodenabschreibung des Geschäftsjahres entsprechend der neu errechneten Jahresabschreibung und den bereits gebuchten Periodenabschreibungen.

Posting Depreciation (general)

Every asset transaction first leads to a change of the forecasted depreciation, however it does not immediately lead to a correction of the value adjustment accounts and depreciation accounts in the balance sheet and P&L.

The depreciation planned per asset is posted as a sum at each account assignment level to Financial Accounting only through the periodic depreciation posting run. You can choose both the posting cycle and the account assignment level per company code and depreciation area (cost center, order). This specification is made in Asset Customizing under *Transactions*.

The following diagram shows the posting of periodic depreciation in account form:

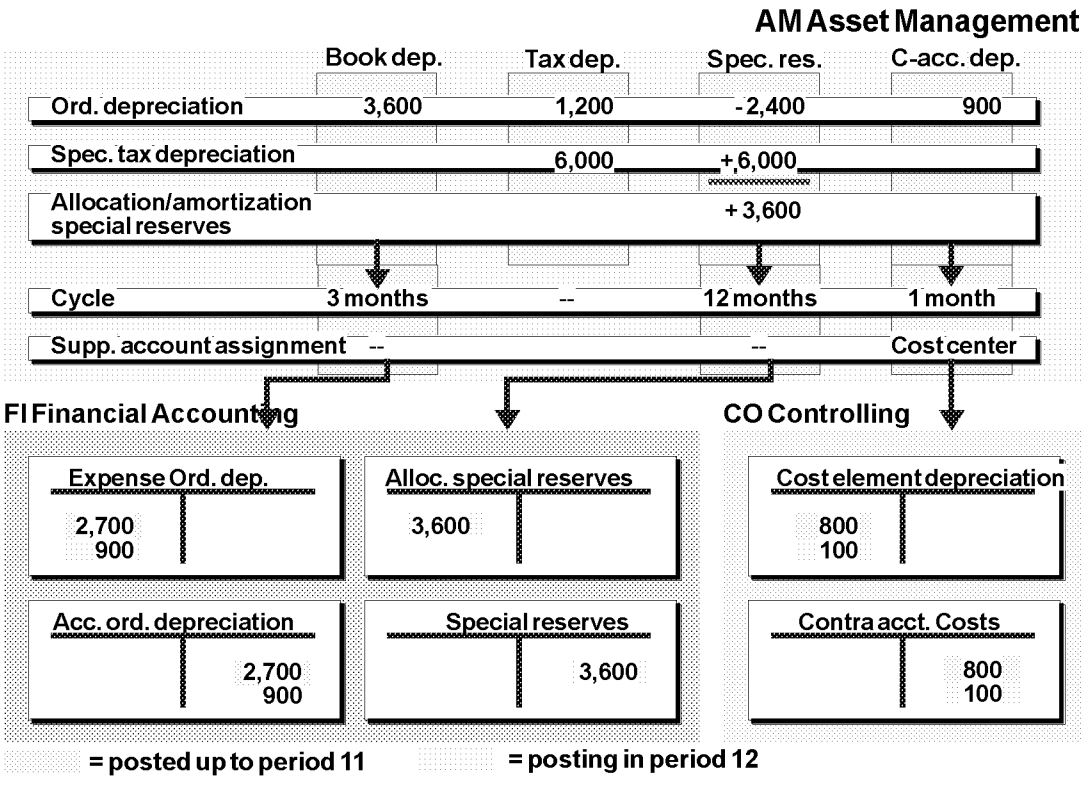


Fig. Depreciation Posting

See also:

System Configuration for Posting Depreciation

Creating a Batch - Input Session for Posting Depreciation

Handling of Errors with Posting Depreciation

System Configuration for Posting Depreciation

The following is a detailed description of the possible Customizing configurations for posting depreciation.

Posting document type

You must specify a document type for posting depreciation. You should only use a document that is limited to being used for batch input (according to the indicator in the FI Customizing definition). In this way, you can prevent unintentional use of the document type.

It is also essential that you specify in the Customizing definition of of the document type that it uses a number range with external number assignment. The depreciation posting program can then assign the document numbers itself (from the specified number range). If the numbers are assigned in this way, the depreciation posting program can keep a check on posting to Financial Accounting. If errors occur, this makes it possible to make corrections.

Depreciation areas to be posted

By selecting individual depreciation areas during the system configuration, you specify from which areas the values should be posted to Financial Accounting. You must enter certain posting rules for these areas.

Posting cycle

The posting cycle determines the length of time between two depreciation posting runs in posting periods. This means that a setting of 1 indicates monthly posting, 3 means quarterly posting, 6 means semi-annual, and 12 means annual (for a fiscal year version with 12 posting periods).

You do not always have to keep strictly to the specified posting cycle. You can request an unplanned posting run by setting the indicator in the initial screen of the depreciation posting program. An unplanned posting run allows you to skip over several posting periods. The program then calculates depreciation, in the period you entered, for all the periods that you skipped over. This might be necessary, for example, if you carried out old data takeover during the fiscal year. The program then calculates the depreciation up to the point of the takeover all at once.

Posting procedure

The system supports two different procedures for distributing the the forecasted depreciation over the posting periods.

- **Depreciation for past periods in a lump sum**
  Using this procedure, the system calculates the posting amount in this period as the difference between the planned depreciation and the depreciation posted up to this period.

Example:

acquisition posted in period 5	12000
dep. start date in period	1
planned annual depreciation	1200
dep. posted up to period 5	0
planned dep. up to period 5	500

dep to be posted per. 5 =	(500-0) = 500
dep. to be posted per period(6-12) =	(700/7) = 100

- **Depreciation for past periods distributed over remaining part of year**
  Using this procedure, however, the system distributes the difference between the forecasted annual depreciation and depreciation already posted, to the remaining posting periods.

Example:

acquisition posted in period 5	12000
dep. start date in period	1
planned annual depreciation	1200
dep. posted up to period 5	0
remaining period incl. per. 5	8
dep. to be posted per period(5-12) =	(1200-0)/8 = 150

The difference between the two procedures becomes evident when processing acquisitions within the fiscal year or when handling post-capitalization. With depreciation for past periods in a lump sum, depreciation falling due on a transaction within the fiscal year (from the depreciation start date, according to period control, up to the current period) is posted in one total. With depreciation for past periods distributed over the remaining part of the year, this amount is distributed equally over the periods from the current posting period to the year end.

Caution
You must be careful if you use the procedure for distributing depreciation over the remaining part of the year, and the depreciation start date comes after the acquisition date. In this case, the system does not distribute the planned depreciation first to the periods after the depreciation start date. Instead, the system already posts depreciation starting with the acquisition date. However, the total amount of planned depreciation is not affected.

Account assignment level

You must specify per depreciation area whether the posting of depreciation is to be carried out for cost centers and orders. This information is then taken from the asset master record, if applicable, and passed on to Financial Accounting as an additional account assignment.

Posting interest

If interest is also managed in a depreciation area, you can post the interest in the same way as depreciation to cost accounts in Financial Accounting.

Creating a Batch - Input Session for Posting Depreciation

Depreciation posting is activated by starting the report RABUCH00. This program creates a batch input session which contains all posting information for Financial Accounting. The required posting documents can only be created by processing this batch input session.

You can call up the report for posting depreciation using *Periodic processing -> Depreciation -> Post depreciation.* The report should be run according to periods (annually, semi-annually, quarterly or monthly). The system then creates posting sessions with postings per depreciation area and account group in accordance with the posting cycles specified in system configuration. For normal periods (no special periods) the system uses the last day of the period as the posting date. The system always uses the last day of the fiscal year as the posting date for special periods.

The parameters for starting the report are described below.

Posting period

For planned posting runs, the periods are posted in chronological order according to the specified posting cycle. The system displays the last period posted in the Customizing transaction for defining depreciation posting rules *(Transactions -> Post depreciation -> Posting rules).*

As long as the last normal period was already posted, it is possible to post to special periods in Financial Accounting. This is generally required, when certain measures for the year-end closing (regarding accounting policy) should be kept from distorting the results for the last normal period. In this case, initiate a planned posting run by entering any special period.

Purpose of the posting run

You can choose the following activities during each posting run:

- **Next planned posting run**
  You can post to the next period that is specified according to the posting cycle. During a regular posting run of this kind, the system does not allow for limiting the run to particular assets.
- **Repeat posting run**
  You can request a repeat posting run for the last period posted. A repeat run might be necessary, for example, if the depreciation terms were changed for individual assets in connection with the year-end closing. During a repeat posting run, the system only posts the differences that result between the first posting run and the repeat posting run (=> no double posting). You can limit the run to particular assets.

- **Restart**
  In the case of a termination of the posting run for technical reasons, during which changes were made to the data base, you must begin the report over again in restart mode. Using the restart mode ensures that all system activities, which were interrupted by the termination, are repeated (see the topic Handling of Errors).

- **Unplanned posting run**
  If, for certain reasons, you want to skip over one or more posting periods, you can do this by specifying an unplanned posting run. The system then creates a posting session for all periods which were skipped, as well as for the period entered. The posting period which you specify must, however, fit into the posting cycle. If you specify period 7, for example, for a quarterly posting cycle, no posting will occur.

Individual list/Test run

In addition to the batch input session, the report provides a list of depreciation. This list shows the planned depreciation for the year, the depreciation which has been posted up to this period, and the depreciation to be posted in this period, for each account group and depreciation area (and, if desired, for each asset). Correlation of the list and the posting documents is aided by the inclusion of the internally assigned document numbers in the list.

In order to ensure that all assets are processed within a posting period, you can limit the report to certain assets only during a repeat run. If desired, you can start the report in test mode.

Procedure

Be aware of the following when posting depreciation:

- Make sure that you have defined the asset posting run in Asset Customizing, and that you have specified the corresponding Financial Accounting accounts in your account allocation.
- Create a batch input session in Asset Accounting with the values of the depreciation areas to be posted. You can specify in the Customizing definition of a depreciation area whether the depreciation from that area should be posted to Financial Accounting.
- Check the report log for assets with errors.
- Process the batch input session using (*System -> Services -> Batch input*).
- Print the posting log for your batch input session and check for posting errors.

Handling of Errors with Posting Depreciation

Various errors can appear when the batch input session is created for the posting of depreciation, or when the session is processed into Financial Accounting. The following describes the causes of these errors and methods for handling them.

Checks during the posting run

After the start of the posting program, the system carries out various checks:

- First the system checks the posting periods that have been entered. For a normal posting run, the posting periods must follow one another in chronological order.
- Then the system runs a plausibility check on the depreciation amounts to be posted. If an error is discovered, this does **not** lead to a termination of the posting program. In the case of errors, the system continues to create the batch input session and lists the assets with errors, along with the cause of the error, in the report log. The depreciation amounts for the assets with errors are not posted in Financial Accounting.

  Check the values for the assets with errors in the asset value display transaction and make the necessary corrections. You can post the depreciation for these assets to Financial Accounting, either through a repeat run or in the next planned depreciation posting run.
- Another important check criterion is the existence of the G/L accounts to be posted. If the system finds a G/L account that is not defined, it terminates processing. You must then first complete the account definitions. Then you must restart the program using the restart option.

Termination while the posting session is being created

If the posting program is terminated while creating the posting session, because, for example, it came to an account that was not defined, the system lists the account allocations with errors for each depreciation area in the log of the posting program. After making the required corrections in Customizing, you must restart the program using the restart option. The program then continues processing in the asset data base from the point at which it previously terminated. The program creates a new, complete posting session, including the data in the session that was terminated. If the first session still exists in the system in the status "Create", you can delete it.

The batch input session is destroyed

If errors cause a termination of the batch input session while it is processing, or if the session is accidentally deleted, you can recreate the batch input session using the report RABUCH20.

In this case, the system only recreates those documents that were not already posted. That is, the recreation takes into account the fact that the posting session may have partially been processed before the termination.

Caution
The prerequisite for the correct processing or recreation of a session is, however, that you have not made any Customizing changes in the meantime to the depreciation posting rules or the number range for the depreciation document type.

Session with errors in the Customizing definitions

If you have created a posting session with errors in the Customizing definitions (for example, incorrectly defined accounts), you are nevertheless required to process the session. Otherwise inconsistencies will result between the General Ledger and the subsidiary ledger, Asset Accounting. Make any necessary corrections directly in the the General Ledger after the session has processed.

Primary Cost Planning

You can determine planned depreciation and interest on a periodic basis for primary cost planning related to cost centers. Using a special report, you can transfer this depreciation and interest to primary cost planning in the CO system *(Periodic processing -> Primary cost planning).* If you are using the components AM-IC and CO-OPA (Order Project Accounting) or AM-IC und PS (Project System), you can also include the simulated depreciation resulting from the planned values of orders or projects in this report for primary cost planning.

Determination of the cost center

The system plans the depreciation and interest for a given asset in the cost center valid in the asset master record.

If you also want to include the planned investment from order or projects, the requirements below must be met:

- Depreciation simulation data must be created in the order/project
- There must be a cost center for settlement or a receiving cost center entered in the master data for the order/project. It is assumed that this is also the cost center that will be used for the planned investment.

The assets, orders, and projects, for which the system cannot determine a cost center, are listed in the log under the cost center "??????????". This is a problem particularly for orders, for which you have already entered explicit settlement rules. The system cannot determine a cost center for these orders, since the settlement cost center is no longer available from the order master record.

The system lists records under the cost center "??????????" in the log, but the values for these records are not included in the productive transfer to the CO system. You need to perform a manual follow-up, in which the costs from the log are planned for the desired cost centers.

Limits

You can limit the selection of assets first in the initial request screen for the report. The limitations according to company code, asset class, business area, cost center and plant apply to assets as well as for orders or projects. The limitation according to location and asset group number applies only to assets. Also enter the depreciation area, from which the the depreciation that is being planned stems.

Enter the fiscal year, for which you are planning. The system determines the cost center/activity type for assets based on the cost center/activity type that is valid for the asset at the **end** of this fiscal year.

You can limit the planning to a given period interval in the fiscal year. If you do not make any limitation, the system plans for the entire fiscal year (from the first period to the last period).

Activity type

You can request activity-type dependent and/or activity-type independent planning.

- **Planning only independent of activity type**
  Planning takes place in the cost center, independent of the activity type. Any activity types in the asset master record are ignored.
- **Planning only dependent on activity type**
  Planning takes place in the cost center, dependent on the activity type. Any asset master records without activity types are ignored.
- **Planning activity type dependent *and* independent**
  Costs for assets with activity types are planned in the cost center dependent on the activity type.

Costs for assets without activity types are planned in the cost center independent of the activity type.

Planning version/planning parameter/distribution key

You must enter a planning version and a planning parameter just as you do for manual planning.

If you specify a distribution key, values are determined based on the time period specified in the from/to period. The values are then distributed according to the distribution key to the individual periods. If you do not enter a distribution key, the system determines the values individually for each period in the specified planning interval.

Separation of fixed and variable costs

It is basically possible to separate the depreciation of assets into fixed and variable portions (see the topics **"Depreciation for Multiple-shift Operation"** and **"Unit-of production Depreciation**). This separation is also recognized in primary cost planning. The report calculates the pure fixed cost portion along with the total costs. The variable costs are determined, according to the definition, as the difference between these two values. However, the system only calculates fixed costs separately if the following requirements are met:

- You must have requested activity-type dependent planning.
- There has to be an activity type specified in the asset master record.
- The planning parameter that is entered must specify manual fixed cost planning that is activity type-dependent.

Transfer of the primary costs

In order to carry out a transfer of the planned values to Cost Accounting, you must select that parameter when starting the report. In this case, you can also enter a document text.

If you do not want any information on individual assets in the log, you can request a summary report. As a result, the log is considerably shorter.

If the program determines values for a given cost element in the production run, the report plans these values in the cost center. During this process, any planned values for this cost element that already exist in the cost center are *overwritten* (that is, the values are *not added*).

The program terminates with an error message if it finds values that cannot be transferred in the production run. Once the error has been corrected, you can restart the program. You can re-run the program for the entire original data, since previously transferred planned values are overwritten and not added together.

Other Periodic Processing

The following topic discusses additional periodic processing carried out in Asset Accounting in the R/3 System (Asset menu: *Periodic processing*).

Unit-of-production method of depreciation

If you want to use the unit-of-production method of depreciation, you enter the total number of units and (for each depreciation posting period) the actual quantity produced. You make these entries in the depreciation key defined for unit-of-production depreciation. The system determines the APC or the remaining book value based on the two values that you enter (see the topic Unit - of - production Depreciation). A depreciation key is based on units of production if the the internal calculation key uses a unit-of-production calculation method (S or T).

Periodic posting

At the present time, the system can only automatically post one depreciation area online to Financial Accounting. Therefore, it is necessary to periodically post asset transactions from other areas to the corresponding reconciliation accounts. Using the special report RASKBU00, you can create a special batch input session. This session posts all asset transactions to the appropriate accounts in Financial Accounting, for all depreciation areas with the correct setting (the indicator in the definition of the depreciation area: Post asset values periodically).

You may have derived depreciation that do not manage acquisition and production costs (for example, depreciation area 03 for special depreciation). For these areas, the program posts the proportional value adjustments resulting from retirements, transfers, post-capitalization, and so on.

Example

A complete retirement is posted for an asset that manages the book depreciation area 01, tax depreciation 02, and the special depreciation area 03 (the difference between 02 and 01). The asset value date is 12/31. The APC is 1000, the asset has a useful life of 10 years, and is in the fourth year of use. The values in the three depreciation areas would be as follows:

01	02	03	
1000	1000	0	APC
-300	-600	-300	prop. accumulated depreciation
-100	-50	50	rop. dep. in current fiscal year
600	350	-250	net book value being retired

The system automatically posts the net book value of 600 being retired from the book depreciation area. This automatic posting takes place online, within the framework of the retirement posting transaction. Area 02 is not posted to Financial Accounting. The program RASKBU00 carries out the necesary parallel amortization of the special reserves in the amount of -250.

Assets with errors

The System records errors, which occur during the procedures listed below, in a separate log:

- posting of business transactions
- calculation and/or posting of depreciation
- fiscal year change
- creation of a new depreciation area

The assets with errors, along with the causes of the errors, are listed in the log.

Index figures

The update of replacement values and insurable values is carried out in the system with the help of index series. You define the features of the index series in Asset Customizing. Specifying the current index figures is one of the tasks you should carry out periodically in Asset Accounting. Under the menu option "Periodic processing", you can specify index figures (to the day, if desired) per defined index series.

Dependent period control

You can specify certain depreciation keys that do not use the period control of the internal calculation key. Instead they use period controls that are time-dependent and company-code-dependent. These depreciation keys are identified by the indicator in their Customizing definition: *Period control according to fiscal years*. You can define your own specific period controls for these depreciation keys

- o per company code
- o per fiscal year and
- o per transaction type.

New depreciation area

It is recommended that you define all the depreciation areas you might need before the productive start of the system. Creating a new depreciation area after the productive start can require considerable manual processing. However, if a special need arises, it is possible to define a new depreciation area and to add assets to this depreciation area. You should follow the steps outlined below:

1. Define a new depreciation area for a chart of depreciation in Asset Customizing **(see the topic "Areas" in the Implementation Guide).** The new depreciation area cannot be solely for handling investment support. You must also define the new depreciation area so that it takes over its depreciation terms and posting values from other depreciation areas.
2. Check the depreciation terms in the asset class for the new depreciation area, and change them if necessary. If you do not want to manage the new depreciation area in all asset classes, you can indicate this by making those asset classes inactive.
3. Specify in Asset Customizing for the individual transaction types, whether posting should always take place in the new deprecation area, or whether posting is optional.

   You should especially check the definitions for transaction types that only post to certain depreciation areas (such as the cost-accounting area), in case these transaction types should also take the new area into account.
4. If you also want to manage investment support measures in the new depreciation area, you must also revise the definitions of the support measures concerned *(Asset Customizing -> Valuation -> Investment support measures -> Areas).*
5. Then you update the asset master records (in the Asset Managment menu under *Periodic processing*. The system then carries out the following activities:
   - It adds the new depreciation area to all asset master records. In this process, the explicitly maintained depreciation terms of the asset class take precedence over the terms in the corresponding takeover area.
   - It adds the corresponding year segments to each asset. The values of the value takeover area are used as a basis. The system recalcualates the replacement value and accumulated past depreciation for the asset. The prerequisite for this step is that you allowed for this option in the Customizing definition of the new depreciation area (*Valuation -> Asset company code -> Old data takeover*). The system calculates only cumulative values for the

years up to the last closed fiscal year. They are not supplied with year segments.

- The system checks the transactions in the takeover area in open fiscal years for their relevance to the new depreciation area. If they are relevant, they are taken over into the new area. The system takes only acquisitions into account, since all other transaction types cannot be created automatically. You must, therefore, process these transactions manually using the work list *(Periodic processing -> Assets with errors).*

Generate period rules

When you specify the fiscal year version for a given company code, the system generates a single calendar allocation for that particular company code. If you are working with a year-dependent fiscal year version in Financial Accounting, therefore, you must newly define the calendar allocation for period control each year. This new definition must take place, at the latest, before the start of the new calendar year. The system offers a separate transaction for making this definition. This transaction generates the calendar allocation for standard period control when you enter the respective fiscal year version and the calendar year.

Analysis of Fixed Assets

A significant task of the R/3 AM System is to make available information about the transactions affecting fixed assets and the course of asset development. Therefore, the system provides the following means of analyzing asset data.

- A comprehensive display transaction shows all values for an individual asset over one or more fiscal years.
- A special trace function makes it possible to analyze the origins of current depreciation.
- Using standard reports, you can evaluate selected groups of assets or all assets.
- You can also use simulation parameters in the display transaction, as well as for running standard reports.
- The functions of the logical data base for Asset Accounting enable you to use the standard reports in a variety of ways, and make it easy for you to develop your own reports (see the topic "Reporting functions").

Individual Asset Analysis

Standard Reports

Simulations

Individual Asset Analysis

The system offers a transaction with extensive functions for displaying asset values (Menu: *Display -> Asset values*). The screens that are described below show all the individual values of an asset in various forms and summarization levels.

Display

When you call up the standard display transaction (Fig. 11-1), the system displays all transactions affecting acquisition and production costs, all depreciation calculated for the asset (including proportional value adjustments), the net book value, and any interest calculated (if applicable). The values at the beginning of the year appear opposite the current planned values for the end of the year. For each depreciation area, you can see the accumulated depreciation from the previous closed fiscal year (balance at the beginning of the year), and the planned depreciation in the current fiscal year. The system displays investment support measures, reserves, and revaluation separately from acquisition and production costs.

By clicking on a field, you can access detailed information about the origin of the displayed values. In addition, you have the Goto option for displaying the depreciation terms for the asset. You can also display the proportional value adjustments for the transactions posted to an asset, as well as the G/L documents in Financial Accounting (Function: *Transactions* - double click on line item).

Display depreciation calculation

In many instances it is not immediately clear how individual depreciation values were calculated, due to complex depreciation terms and asset transactions. The system, therefore, enables you to clearly see the origin of asset values by identifying the various levels of the calculations and depreciation terms involved. You can obtain detailed, step-by-step information regarding the calculated asset values, per fiscal year, for each depreciation area, depreciation type and asset transaction. After you select the depreciation in a depreciation area by clicking on it with the mouse, the system displays the asset balance at the beginning of the year, as well as the planned depreciation. In addition, the system lists all changes to the value of the asset during the current fiscal year, along with the corresponding corrections to the planned yearly depreciation. You can also use the goto option to go directly to the definition of the respective depreciation key.

Revaluation

You can call up standard reports for the assets you are considering under the menu heading *Environment*. You specify the allocation of the reports to the menu entries in Asset Customizing. In this way, you can integrate your own reports and individual report versions into the menu.

Recalculate depreciation

Under *Edit*, you can initiate the recalculation of planned depreciation for the displayed asset. (See the topic Recalculating Depreciation)

Standard Reports

In order to meet the demand for information within a company, the system offers the following standard evaluations:

- **General evaluations**
  - Asset list
  - Asset directory
  - Asset history sheet

    You can freely define the layout of the asset history sheet (see the topic Asset History Sheet). SAP delivers pre-defined versions of the history sheet with the standard system.
- **Depreciation lists**
  For the analysis of depreciation values, the system offers evaluations which compare
  - depreciation in one or more depreciation areas
  - depreciation of all depreciation types or
  - interest, revaluation and depreciation.

  A simulation list makes it possible to simulate projected depreciation for orders and projects. (See the topic Simulations) There is also a report available that shows the depreciation posted to Financial Accounting in the current fiscal year.
- **Transaction lists**
  In order to evaluate asset transactions, the system provides reports on acquisitions, retirements and transfers within the fiscal year.
- **Special reserves**
  The report displays the current status of special reserves, as well as the allocation and amortization of special reserves handled on the liabilities side.
- **Property list**
  A special property list displays all data regarding the valuation of assets within the framework of net worth tax requirements.
- **Insurance list**
  The insurance list displays all insurance data and insurable values for the selected assets.
- **Investment support measures**
  This report displays the assets that are eligible for investment support in a given fiscal year. The report also creates the corresponding posting session on demand (see the topic Investment Support Measures).
- **Leasing liability in future fiscal years**
  This report displays the expected liability in future fiscal years for the payment of lease installments (see the topic Valuation Methods for Leased Assets).
- **Manual depreciation**
  Using this report you can determine the manual depreciation planned for a given fiscal year.
- **Change lists**
  Change lists log all master data changes for assets and asset classes.
- **Country-specific reports**
  There are a series of special reports to satisfy the special reporting demands of specific countries.

List of origins

This report lists the origin of transactions that affect acquisition value in a fiscal year. For each line item, the report lists whether it concerns

- a settlement of an order or project
- a settlement of an asset under construction

- a purchase acquisition (with vendor)
- a transfer from one asset to another
- a balance forward posting following line item settlement (only for assets under construction)
- an acquisition against a clearing account (G/L account)
- a goods receipt or
- a transaction that only affects assets (such as an acquisition in the cost-accounting area only).

For line items from the settlement of an asset under construction, it is also possible to identify the origin of the line item amount. You can see what amounts of which settled line items of the asset under construction make up the line item amount. It is not currently possible to get a similar display for settled line items from orders or projects.

In certain circumstances, it may not be possible to obtain a clear proof of origin for the following transaction types: purchase acquisition, asset transfer, acquisition against clearing account, and goods receipt. If this is the case, the system attempts to determine the origin using plausibility checks, but the transactions are marked with a *(?)*. In these instances, you can only obtain more exact information from the orgiginal document. You can display the original document from the list by selecting the function *Choose*.

General functions

Using the general functions of asset reporting, you can structure these standard reports according to your demands (see the topic "Reporting procedure"). You can obtain detailed information on the individual reports by calling up *Help -> Extended help* in the initial screen of the reports.

Request screens

The selection criteria for standard reports are distriuted over several screens:

- The first screen is the same for all reports. It contains the selection criteria for the logical data base for Asset Accounting.
- The screens that follow contain the individual selection criteria for the given report.

Simulations

A significant function within the framework of Asset Accounting is planning the future development of the value of fixed assets. For this reason, the system offers the following simulation options:

- You can analyze changes in the value of individual assets using simulated depreciation terms and transactions.
- You can carry out standard evaluation (reports) with simulated depreciation terms.
- Planned investments, as well as orders or projects, can be taken into consideration when analysing projected depreciation. The AM-IC component, in conjunction with the components CO-OPA (Order Project Cost Accounting) or PS (Project System), makes this possible.
- You can simulate asset retirement for low value assets and intangible assets. The assets then appear in the asset history sheet as if they had already been retired, even though no actual retirement has taken place.

Simulation of changes to the value of individual assets

You can use the transaction for displaying asset values to look at values for any fiscal years and fiscal year intervals. The system projects depreciation and values for future fiscal years based on the current values and depreciation terms. In this way, the system enables you to preview the course of future depreciation of the asset.

In order to obtain a more in-depth analysis, you can simulate changes in the depreciation terms (useful life, depreciation key, depreciation start date, index). In addition, you can simulate any number of transactions directly in the value display transaction. The system then displays all asset values at the same time, based on the simulated terms and asset transactions.

Analysis using simulation versions

Under the menu heading *Reporting* in the Asset application menu, you can define simulation versions for the standard depreciation lists. In the simulation version, you specify selection criteria (for example, asset class, depreciation key, and so on) and simulation parameters (depreciation key, useful life, and so on). In addition, you must enter a period of validity for each simulation version. The simulation will then only apply to assets that were capitalized within the defined validity period.

When starting a standard report, you only need to enter the defined simulation version in order to generate the simulated analysis (see the topic The Logical Data Base ADA). Naturally, you can obtain an analysis of projected values for future fiscal years by entering the appropriate report date.

Projected depreciation with planned investments

Projecting depreciation is, generally, only realistic if the effects of planned investments are also considered. Therefore, there is a special report for projected depreciation that also evaluates investment orders or investment projects. The evaluation is made possible by the integration of the AM-IC component with the CO-OPA (Order Project Cost Accounting) or PS (Project System) components. You can specify parameters for depreciation simulation in the master records of the orders or projects.

In the master data transaction for orders, you will find depreciation simulation data under the menu heading *Details*. In the master data transaction for projects, you will find depreciation simulation data under *WBS element*. Here you can assign an asset class and a planned start-up date to the order or project. In the next screen, you can individually modify the default depreciation terms from the asset class. If you do not intend to capitalize the full planned amount in certain depreciation areas, you can enter the corresponding investment percentages here. The calculation of depreciation will then be based on the values in structure planning for the order or project.

Simulation lists

You can forecast depreciation for future fiscal years via *Reporting -> Depreciation list -> Depr. simulation*. Depreciation will be simulated up to the year you specify in the report date.

If you are using the components AM-IC and CO-OPA or AM-IC and PS, you can use this function to evaluate planned capital investments in orders or projects.

- If the planned start-up date is in the current fiscal year or a future fiscal year, the system treats the total of the planned amounts for the order/project, which are planned up to and including the fiscal year of the start-up date, as an acquisition made on the start-up date. Amounts planned for fiscal years following the start-up date are treated as acquisitions at the beginning of the respective fiscal year.
- On the other hand, if the start-up date was before the current fiscal year, then only those planned amounts starting with the current fiscal year (inclusive) are treated as acquisitions at the beginning of the respective fiscal year. Planned amounts from years before the current fiscal year are ignored.

Another problem can arise in the current fiscal year, if portions of the planned investment have already been posted as asset acquisitions. These values will be then be considered twice in the depreciation forecast. In order to avoid this, it is recommended that you select "values at fiscal year start" when working with capitalized assets. If you are requesting a simulation that does not take planned investments into account, then it makes sense not to check off the field for "values at fiscal year start" before running the report.

You can use the general reporting functions, such as sort versions and summary report options. You can also use a simulation version to replace the usual depreciation terms before running the report. You can define any number of simulation versions, in order to carry out depreciation simulation using different depreciation parameters. Simulation versions are found in the Asset Management menu under *Reporting*.

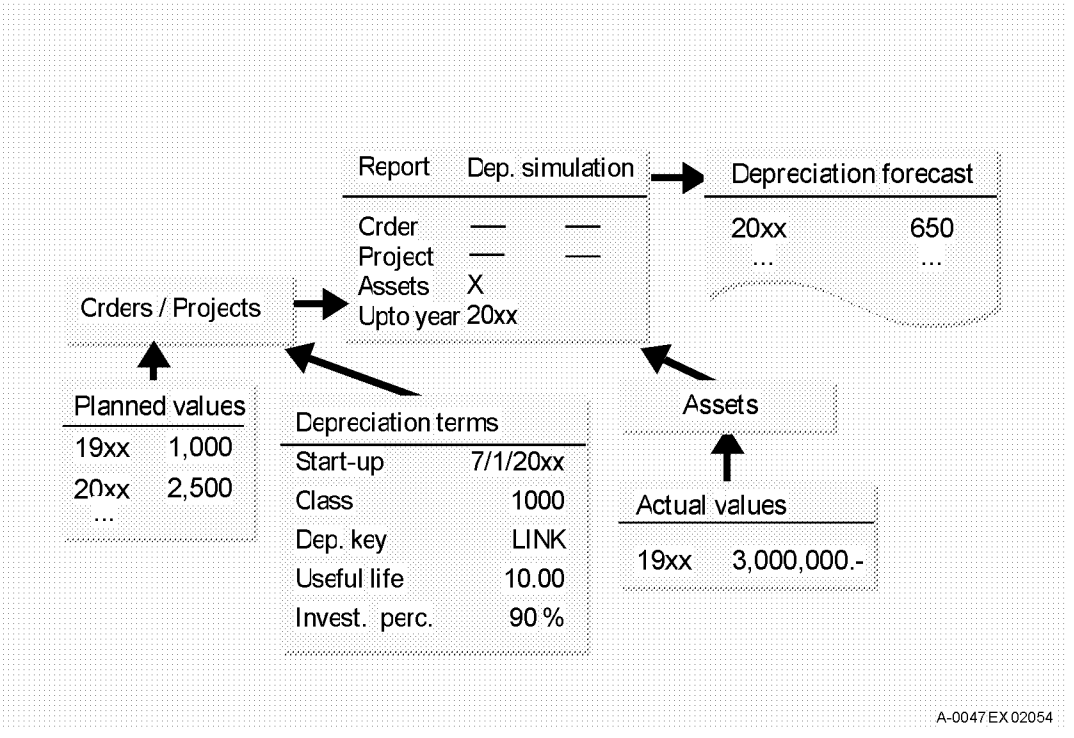


Fig. Simulation lists

Retirement simulation in the asset history sheet

You can use the asset history sheet to simulate the retirement of an asset. The history sheet displays the asset as if it were already retired, although no actual retirement has been posted. You can specify the assets for which you want to simulate retirement before you run the report.

- **Retirement simulation of low-value assets (LVA)**
  Before you run the report, enter the asset class for low-value assets, as well as the time period for the simulation. The System then carries out simulation for any assets belonging to the asset class specified, which have a capitalization date within the time period specified. A full retirement is simulated for the end of the fiscal year, as long as the book value of the asset is zero at that point in time (which is usually the case for low-value assets).

- **Retirement simulation for intangible assets**
  Before running the report, enter the asset class for intangible assets. Retirement is then simulated for the assets belonging to this class. A full retirement is simulated for the end of the fiscal year, as long as the planned useful life of the asset is expired at this point, and the book value is zero (which is usually the case when the useful life is expired).

Since asset retirement is always simulated at the end of the fiscal year, it does not make sense to request the report with a report date during the fiscal year. The report date should be the same as the end of the fiscal year.

In addition, the retirement simulation takes into account not only the requested fiscal year (the fiscal year of the report date), but also the previous fiscal year. This means that the following *continuity principle* is in effect: if the asset already met the specified requirements for retirement simulation at the end of the previous year, then a retirement is also simulated for the end of the previous year. If this occurs, there are two possibilities:

- There were no further transactions posted to the asset in the current fiscal year. Then the asset is treated as already retired in the previous year, and no longer appears in the list.
- Additional transactions were posted to the asset in the current fiscal year. In this case the asset is treated as though the complete acquisition value was retired at the end of the previous fiscal year, however the asset is not deactivated in this case.

Reporting Procedure

An important function of the Asset Accounting System is to support the varied reporting requirements as flexibly as possible. There is a whole range of standard reports at your disposal for this purpose. You can specify the layout of lists according to your requirements.

In the following topics, you will find a description of the general functions of reporting in Asset Accounting, as well as the possible ways of structuring the standard reports (the asset history sheet, in particular).

The Logical Data Base ADA

General Functions and Sort Versions

Asset History Sheet

The Logical Data Base ADA

The logial data base *ADA* places the asset master records as well as your transactions at the disposal of the application reports. You can look at the data base structure with transaction **SE36**.

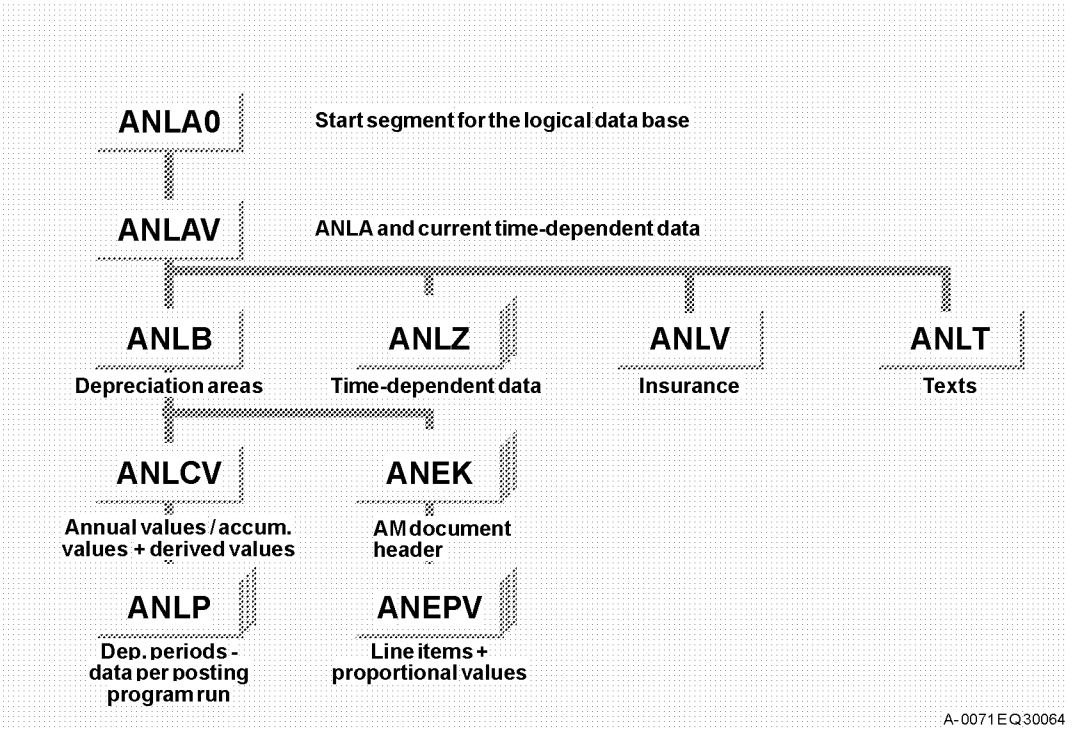


Fig. The logical data base ADA

Standard reports

The following functions make up the initial screen of the standard reports

- **Selection keys**
  Along with the primary keys (company code, asset main number and sub- number), the following secondary keys are also available to provide for quicker access to information:
  - cost center
  - plant
  - asset class
  - business area
  - location
  - asset group number (in the case of real estate: asset group)

- **Report date**
  Reports can be run at the year-end or during the fiscal year. Reporting during the year means that all transactions after this report date will be ignored and only the depreciation up to this point will be calculated. Therefore, it is possible to create an asset list with book values up to the first quarter, for example. You can also request past years, providing they are still in the system.
  It is also possible to request future years. You can only use this function with the report date set

at the end of a year. You then can select whether you want to see just the specified year under review or the annual values of all years up to the desired year under review.

The report date "01/01/YYYY" has a special significance. If this date is selected, the data base will deliver the same data as at the end of the previous year. In this way, the system takes into account the fact that the values at the end of the old fiscal year and the beginning of the new fiscal year should be identical, and that you must be able to verify this.

- **Depreciation areas**
  You can specifically request up to three depreciation areas. You can also request all depreciation areas for an asset by entering "*" in the first depreciation area field on the initial screen. However, the only standard report that uses this function is the depreciation compare list. In the other reports you can only enter one depreciation area.

- **Sort versions**
  (see the topic General Functions and Sort Versions)

- **Summarization levels**
  The evaluated data can be provided at three different summarization levels:
  - all asset main numbers and sub-numbers
  - only asset main numbers
  - only totals at the level of group of levels

- **Translation method**
  The method for translation of currency is a furthr parameter of the logical data base. You can define a translation method in Asset Customizing *(Reporting)*. You can enter this method when starting a report. The system then determines the asset values according to this translation method and provides them in the proper currency.

If you have made use of the customer modification projects, it is possible to

- enter a different master record field in place of the asset main number (such as the inventory number) (see the topic Individual Asset Number in Reporting)
- carry out individual currency translation (see the topic Currency Conversion in Asset Reporting).

Individual reports

Some functions of the logical data base do not appear directly on the initial screen of the standard reports. However, you can use these functions to create your own reports.

- **Summarization at asset main number**
  If desired, you can request a report that displays only one data record for each asset main number. That means the values of the asset are summarized at the asset main number level. The system then uses the master record information, as well as the depreciation area information, from the first asset sub-number that has values (including 0000).

- **Additional information**
  The application table *ANLA* has more extensive information and is made available to the report in a special structure (ANLAV).

  This information is:
  - all time-dependent data that is valid for the report date (cost center, business area, etc.)
  - balance sheet account of the requested depreciation area (if none exists, the so-called master area is used)

- balance sheet item of the balance sheet account (optional)
- cost center hierarchy area
- value type: 0 =Asset, 2 = Order, 3 = WBS element
- for value type 3: Project relating to WBS element

o **Total values**
In addition to the stored values, the transferred value field structure also contains different totals calculated at time of creation, such as the net book value at the end of year.

o **Planning records**
Along with the capability of reporting on active assets, it is possible to create reports for planned investments (orders/projects). These planned investments are then evaluated in the light of the data regarding their depreciation simulation.

General Functions and Sort Versions

General functions for list reports

In the list reports of Asset Accounting, there is a series of general functions which are discussed below.

- **Sort versions**
  The sorting/totalling of the data records that are issued is variable and is determined on the initial screen of the report by specifying the so-called sort versions (see below).

- **Summary report**
  By selecting the parameters for the summary report, you determine whether the evalauation
  - displays only totals for the sort levels in the respective sort versions
  - lists only asset main numbers (with summarized values for all sub-numbers)
  - lists all sub-numbers and main numbers individually

  Summary reports are especially useful for evaluating very large datasets. Using summary reports, you can access summarized totals information, without having to create extremely long lists.

- **Ranking list**
  By entering a number 'nnnnn' in this field, a ranking list - one per company code - is issued containing the top nnnnn fixed assets. It is sorted in descending order by the value field which you marked under "sorting according to value field".

- **Sorting according to value field**
  You can also determine that additional sorting takes place according to value field on the lowest sort levels of the list. All or part of the value fields issued in the respective report are offered.

  Sorting is carried out in descending order from the actual amount of the value field. This request only makes sense for an individual report (that is, not a summary report). If you requested a ranking list, you must mark a value field here. The ranking list is then created with reference to this value field.

- **Simulation der Abschreibungswerte**
  Abschreibungslisten sind mittels sogenannter Simulationsvarianten simulierbar. Diese Varianten können Sie selbst definieren.

  Legen Sie dabei folgendes fest:
  - Der Bewertungsbereich, für den die Simulation stattfindet
  - Die Anlagenklasse (maskierbar von rechts nach links mit '+')
  - Der Abschreibungsschlüssel
  - Ein Gültigkeits-bis-Datum, wobei eine Anlage für eine Simulation ein Aktivierungsdatum bis zu diesem Datum haben muß.

  Im Funktionsteil der Simulationstabelle sind folgende Möglichkeiten gegeben:
  - neuer Abschreibungsschlüssel
  - Veränderung der Nutzungsdauer in %, z.B. 80% oder 125%
  - Ein Gültigkeits-Ab-Datum, wobei eine Anlage für eine Simulation ein Aktivierungsdatum ab diesem Datum haben muß.

  Die Abschreibung der Vergangenheit kann mit diesem Verfahren zur Zeit nicht neu gerechnet

werden. Diese Funktion wird mit einem späteren Release zur Verfügung gestellt.

In allen Abschreibungslisten, in denen die Benutzung einer Simulationsvariante unterstützt ist, wird die verwendete Simulationsvariante im Seitenkopf der ausgegebenen Liste mit vermerkt. Über *F2 = Auswählen* können die Ersetzungsvorschriften der verwendeten Simulationsvariante angelistet und auf Wunsch ausgedruckt werden.

o **Additional entries for batch run**

- Additional heading

  By specifying an additional heading, you can modify the list header. The list header then contains the specified additional heading.

- List separation

  By selecting this parameter, you can specify separate output destinations for each company code according to table TLSEP.

- Microfiche line

  By selecting this parameter, you can modify the list header. The list header then contains, among other things, information relevant for microfilming.

You can combine these parameters in any way you want.

o **Function *F2 = Choose* in lists**

Mosts lists offer the function F2 = Choose. Depending on the object that is selected, the system supplies certain detailed information. These objects can be:

- Asset main number and sub-number

  By choosing here, you branch directly to the display of the respective asset master record.

- Document number

  By choosing here, you branch directly to the display of the respective document.

- Order or project number

  By choosing here, you branch directly to the display of the respective order or project.

- Error number

  If assets with errors were logged, and you choose the error number, you branch directly to the long text for the error.

- Simulation versions

  By choosing here, you branch directly to the display of the selections made for changing depreciation in the simulation version being used.

versions

Sort versions are used for sorting and totalling the data records in report lists in Asset Management. You enter the sort version as a parameter before running the report. The system offers a standard sort as a default for each report. You can change this default. When you press the F4 key for entry help on the field "sort versions," the system displays an overview of the existing sort versions.

You can modify existing sort versions in Asset Customizing, under the menu option *Reporting*. You can create completely new sort versions under the menu option "Edit." Follow the procedure below:

o **Naming the sort version**

Name the sort version using a 4 character identification code. You enter this identification code as a parameter when running reports in order to obtain the desired sorting or totalling.

You should choose a name that has some meaning to you, in order to assist you when you use

F4 entry help.

- **Specifying the sort hierarchy**
  In order to specify the desired sort hierarchy, enter the name of the table and the root name of the desired sort field. You usually need to determine these technical names beforehand, using the information system of the Data Dictionary. You can use all the fields in the dictionary tables ANLAV and ANLB as sort fields.

  In addition, if you enter the length and the offset, you can include only specific parts of the character string of the sort field in the sort key. By using this method, you can use different parts of the contents of a field in the same sort version for different sort levels.

  Example

  You want to use the first 2 characters and the characters 3 - 4 of the field TXJCD as sort levels:

Field	Offset	Length
TXJCD	0	2
TXJCD	2	2

- **Selection of totals**
  You specify the sort levels for creating totals in the column 'Total.'

- **Breakdown of totals by depreciation key/transaction type**
  By setting the indicator "Statistics," you can obtain a more detailed breakdown in certain lists. You can break down the total of a group level according to depreciation key (for depreciation lists) or according to transaction type (for transaction lists).

- **Totals by main number**
  By setting an indicator in the definition of the sort version, you can obtain additional totals for each asset main number. This total represents the cumulative value of all sub-numbers for the main number. The system will only create this kind of total if the asset has at least two sub-numbers.

- Another indicator makes it possible to sort asset sub-numbers for each main number in descending numerical order. In this way, the system usually displays the most recently created sub-number first.

Asset History Sheet

Basic versions of the asset history sheet

The asset history sheet is the most important and most comprehensive evaluation report for the year-end closing or for an interim financial statement. As with all other lists, it can be set up with any sort versions, and total on any group level. You can also create a compact totals list without individual asset information.

You can also freely define line and column structure in the asset history sheet. SAP delivers country-specific versions of the asset history sheet, which satisfy the legal requirements of the given country (for example, the 4th EC directive). Additional history sheet versions are also available (for example, for displaying the development of reserves for special depreciation).

13 - Columns (Standard version)

Afc Fy-strt. Dep Fy-strt.	Acquisition Dep. fer year Post cap. depr.	Retirement Retire. depr. Write-ups	Transfer Transfer depr.	Current APC Cumulative depr.
Bk.val Fy-strt.	Post capitalization	Down payments	Invest. subsidy	Current bk. val.

13 - Columns (expanded version)

Afc Fy-strt. Dep Fy-strt. Bk.val Fy-strt.	Aquisition Dep.fer.year	Retirement Retire.depr.	Transfer Transfer.depr.	Post capitalizat. Postcap. depr.	Invest. subsidy Write-ups	Current APC Cumulative depr Current bk. val.

Fig. Versions asset history sheet

Definition of a history sheet version

In order to create a new history sheet version, you must first name it using a four-digit identification code. You will have to specify this identification code in the asset history sheet report as a parameter (in the second page of the report request screen) in order to implement the desired history sheet version.

You define new asset history sheet versions in Asset Customizing (-> *Reporting*). You set up the structure of the lines and columns of the asset history sheet there. A maximum of 10 lines and 8 columns is possible, but a history sheet version must have at least 2 columns. The first column is always "00", the last one always "99". All further columns must be between "01" and "80". The first step is to consider which lines and columns you need. Enter these into free line or column fields. If more than 5 columns are needed, you must scroll to the right. When you press Enter, the lines and the columns are positioned correctly. You must then enter all headings for the history sheet items you have created. A history sheet item which has already been created in another language, but which has not yet received a description in the maintenance language, is marked with "*". In order to define which asset transactions should flow into which history sheet items, you can go through the individual history sheet items one by one, using **Choose**.

History sheet groups

There is list of the so-called history sheet groups in the detail screen of each history sheet position. In the standard system, as delivered by SAP, this screen contains the transaction type groups that

are relevant for the history sheet, as well as the special groups YA (values at the start of the year), YY (annual values), and YZ (year-end values). The transaction type groups for the values below are relevant for the asset history sheet:

- o acquisition and production costs,
- o down payments,
- o investment grants and
- o write-ups.

Every history sheet group contains 8 indicators. Each indicator represents a history sheet sub-group. By setting these indicators in the selected history sheet position, you specify that the value fields associated with this group will flow into the selected history sheet position. You can see which value fields are represented in the history sheet sub-groups in the list that follows. History sheet sub-groups that are already allocated to a different (not the selected) history sheet position are identified with a period. By pressing *F7=Info* on the indicator, you can determine the history sheet position into which the transaction type sub-group flows.

The history sheet groups that are delivered with the standard system guarantee uniformity when defining a history sheet version. They help to insure that all transactions that belong to the same transaction type group are handled uniformly. This makes sense, and is also enough of a guarantee in most cases. The definition of the transaction type may contain a transaction type group that does not match the history sheet group, only if you want to allow for transaction types from the same transaction type group to flow into different history sheet positions. In order to allow for this variation, you can define completely new history sheet groups in Asset Customizing.

History sheet groups and associated value fields

The meaning of the history sheet sub-groups is not always the same. Therefore, the standard history sheet groups are explained below.

- o **History sheet group YA (cumulative values at start of fiscal year)**

  The history sheet sub-groups have the following definition:
  - Trn = accumulated acquisition value start of fiscal year,
  - Acc.dep-Ord = accumulated ordinary depreciation start of fiscal year,
  - Acc.dep-Spc = accumulated special depreciation start of fiscal year,
  - Acc.dep-Upl = accumulated unplanned depreciation start of fiscal year,
  - Acc.dep-6B = accumulated transfer of reserves start of fiscal year,
  - App-Trn = accumulated appreciation start of fiscal year,
  - App-Ord = accumulated appreciation ordinary depreciation start of fiscal year,
  - IGr = accumulated capital investment grants start of fiscal year.
- o **History sheet group YY (annual values)**

  The history sheet sub-groups have the following definitions:
  - Trn = transactions changing the acquisition value of the fiscal year,
  - Acc.dep-Ord = planned ordinary depreciation of the fiscal year,
  - Acc.dep-Spc = planned special depreciation of the fiscal year,
  - Acc.dep-Upl = planned unplanned depreciation of the fiscal year,
  - Acc.dep-6B = planned transfer of reserves of the fiscal year,
  - App-Trn= planned appreciation of the fiscal year,
  - App-Ord= planned appreciation ordinary depreciation of the fiscal year,
  - IGr = investment grants of the fiscal year.
- o **History sheet group YZ (cumulative values at the end of the fiscal year)**

  The history sheet sub-groups have the following meanings:

- Trn = accumulated acquisition value end of fiscal year,
- Acc.dep-Ord = accumulated ordinary depreciation end of fiscal year,
- Acc.dep-Spc = accumulated special depreciation end of fiscal year,
- Acc.dep-Upl = accumulated unplanned depreciation end of fiscal year,
- Acc.dep-6B = accumulated transfer of reserves end of fiscal year,
- App-Trn = accumulated appreciation end of fiscal year,
- App-Ord = accumulated appreciation ordinary depreciation end of fiscal year,
- IGr = accumulated capital investment grants end of fiscal year,

o **History sheet groups 70, 71, 72, 73, 74 (write-ups)**

Only 4 history sheet sub-groups are possible here, namely

- Acc.dep-Ord = Write-up ordinary depreciation,
- Acc.dep-Spc = Write-up special depreciation,
- Acc.dep-Upl = Write-up unplanned depreciation,
- Acc.dep-6B = Write-up transfer of reserves.

All other history sheet groups

The history sheet sub-groups have the following definitions:

- Trn = transaction amount,
- Acc.dep-Ord = proportional ordinary depreciation,
- Acc.dep-Spc = proportional special depreciation,
- Acc.dep-Upl = proportional unplanned depreciation,
- Acc.dep-6B = proportional transfer of reserves,
- App-Trn = proportional appreciation,
- App-Ord = proportional appreciation ordinary depreciation,
- IGr = proportional capital investment grants.

Proportional values only result for history sheet groups for asset retirements, transfer postings and post capitalization.

The following diagram illustrates the procedure for defining the asset history sheet using the selected history sheet position "Depreciation - Retirement":

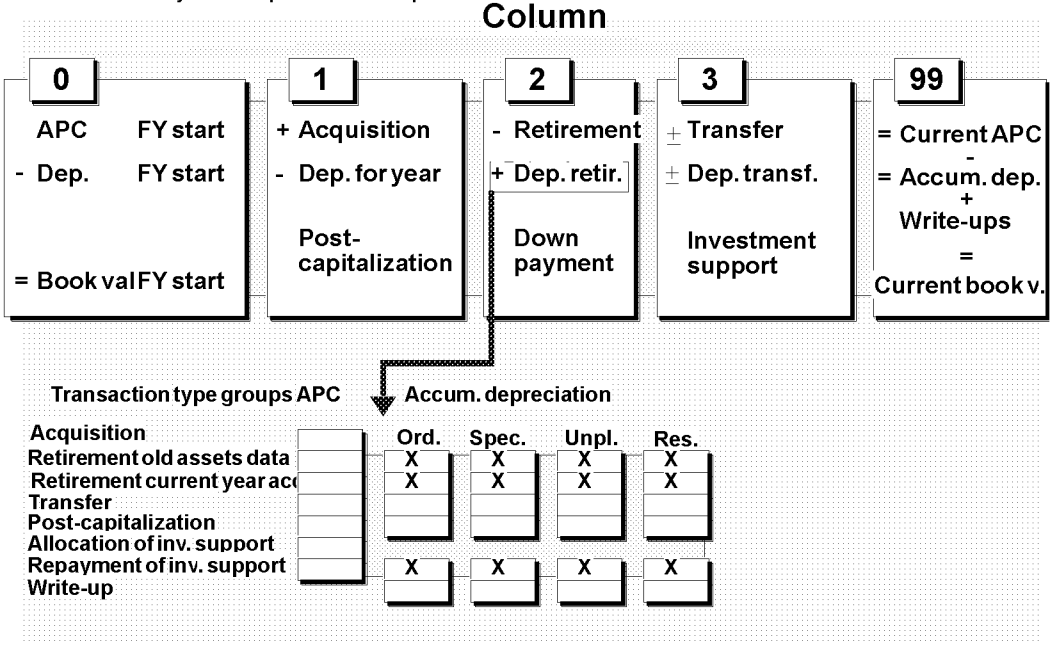


Fig. Asset history sheet definition

Completeness

An asset history sheet version can be called "complete" when every transaction relevant to the history sheet, and - if they exist - every value adjustment which has been made to them, has been assigned to at least one position in the history sheet. Transactions relevant to the history sheet are the posting of acquisition and production costs, down payments, investment grants and write-ups.

An asset history sheet version is only then complete when:

- Every transaction type relevant to the history sheet is assigned to a history sheet group.
- The allocation indicator in column 1 to 5 is set (that is, contains either an X or a period) for every history sheet group except "YA", "YY" or "YZ". These indicators are in the definition of the asset history sheet version, in the detail screen for the history sheet position.

When the asset history sheet version is complete, the indicator for completeness automatically appears in the definition for the version, in the overview screen for the position.

When creating an asset history sheet, it is noted in the header of every screen whether the asset history sheet version being used is a complete or incomplete version.

When you are maintaining an asset history sheet version in Asset Customizing, you can requesst a log of the completeness check. You can see in this log the reason that a history sheet version is not complete.

Individual User Modifications

The system enables you to make your own enhancements to certain standard functions. There are specific points in the standard program that are prepared by the system for calling up your own individually modified function modules. In order to make enhancements, you need to activate a corresponding modification project. The system then automatically calls the function module up at the appropriate place in the program. The function modules contain an include of a sample program. You program your individual modifications in this program. The name of the included program always begins with Z, so that the system recognizes the program as customer-specific. This method of identifying the program ensures that it is not overwritten when a new release is delivered.

The following describes the possible enhancements.

Individual Determination of Base Value

Checks during Old Data Takeover

Checks during Posting

Definition of Manual Revaluation

Long Text Output in Reporting

Currency Conversion in Asset Reporting

Individual Asset Number in Reporting

Individual Determination of Base Value

As of Release 2.1D, you can determine for yourself the base value of a calculation key for calcuating depreciation. You need to carry out the following activities to make this individual determination of the base value possible:

- Add to the fixed values in the domain BEZWKZ using the function *Data Dictionary* (SE11). The fixed values ZA to ZZ are already defined in the domain BEZWK for customer-specific enhancements. You can use these fixed values for your individual determination of base values. Modify the short texts for these fixed values according to their use. Then you must activate the domain in order to make the changes accessible.
- Modify the function module EXIT_SAPLAFAR_001 to your specific requirements (see the example).
- Activate the project AFAR0001 using the function *Project management of SAP enhancements* (CMOD).

The function module EXIT_SAPLAFAR_001 offers the following parameters for the determination of base value:

- I_AFABE - Depreciation area, for which the base value should be determined
- I_ANLB - Depreciation terms of this depreciation area
- I_ANTS - Partial structure of the asset master record (ANLA)
- I_BEZWKZ - Base value indicators (ZA bis ZZ).

In addition, you can access local copies of the tables

- T_ANEA - Asset line items, proportional values
- T_ANEP - Asset line items
- T_ANLC - Asset value fields
- T_ANLZ - asset allocations, for which the value date is set (for which a from and to date is set)

The only return value that is expected is the base value (E_BEZWRT). This function module already contains an include of the program ZXAFAU01. You have to create this included program yourself. You must provide this program with the program coding necessary for your individual determination of the base value. You must use the names given in order for all your customer-specific data to be available. Below is a simple example for programming the function module EXIT_SAPLAFAR_001:

```
*---------------------------------------------------------------------*
*    INCLUDE ZXAFAU01                                                 *
*---------------------------------------------------------------------*
DATA: CON_BEZWKZ_ZZ LIKE T090P-BEZWKZ VALUE 'ZZ',
      CON_BEZWKZ_ZY LIKE T090P-BEZWKZ VALUE 'ZY',
      CON_BEZWKZ_ZX LIKE T090P-BEZWKZ VALUE 'ZX'.

LOOP AT T_ANLC WHERE AFABE = I_AFABE.
   E_BEZWRT = 0.
   CASE I_BEZWKZ.
*               acquisition value
     WHEN CON_BEZWKZ_ZZ.
               E_BEZWRT = T_ANLC-KANSW + T_ANLC-ANSWL +
                          T_ANLC-KMAFA + T_ANLC-MAFAV + T_ANLC-ZUSMA +
                          T_ANLC-MAFAM + T_ANLC-MAFAL .
*               half acquisition value
     WHEN CON_BEZWKZ_ZY.
               E_BEZWRT = ( T_ANLC-KANSW + T_ANLC-ANSWL +
```

```
                              T_ANLC-KMAFA + T_ANLC-MAFAV + T_ANLC-ZUSMA +
                              T_ANLC-MAFAM + T_ANLC-MAFAL ) / 2.
*                 replacement value
      WHEN CON_BEZWKZ_ZX.
                  E_BEZWRT =     T_ANLC-KANSW + T_ANLC-ANSWL +
                              T_ANLC-KMAFA + T_ANLC-MAFAV + T_ANLC-ZUSMA +
                              T_ANLC-MAFAM + T_ANLC-MAFAL +
                              T_ANLC-KAUFW + T_ANLC-AUFWV +
                              T_ANLC-AUFWP + T_ANLC-AUFWL .
   ENDCASE.
*  leave loop.
   EXIT.
ENDLOOP.
```

Checks during Old Data Takeover

The program (RAALTD11)for the direct import of data from your previous system carries out the checks that are most essential for old data takeover. You can provide for your own additional checks as follows:

- Activate the project ALTD0001 using the function *Project management of SAP enhancements* (CMOD).
- Modify the function module EXIT_RAALTD11_001 to your individual needs.

The function module EXIT_RAALTD11_001 offers the following parameters for additional checks on the consistency of data:

- I_ANLA - Asset master record segment
- I_ANLV - Insurance data
- I_ANLZ - Valuated asset allocations.

The information that you can convey to the old data takeover program corresponds to the general transmission of messages.

- If the error indicator is in the initial position (E_ANFMKZ) then no further processing is carried out.
- You should use the error indicator 'E' for the situation when the error means that the asset is not transferred.
- All other possible values for the error indicator ('W', 'I') are for informational purposes only. You can make further limitations by entering the attribute for the message (E_ARGBG) and the message number that belongs to it (E_MSGNR) as well as the four variables (E_ANFMV1 to E_ANFMV4).

All the messages that are generated in the transfer program are listed and included in the general log at the end of the takeover. By selecting a message in the log with F2, you can go directly to the long text for the message.

There is an example for the control for correct evaluation groups in in the function module EXIT_RAALTD11_001. You should adapt this function module to your individual needs.

This function module also already contains the include ZXAFAU01. You must supply this include with the program flows that you need for the determination of your individual base values. You must use the specified names in order for the data transferred in the customer function module to be available.

Below is a simple example for how you can set up the function module EXIT_SAPLAINT_001:

```
*---------------------------------------------------------------------*
*     INCLUDE ZXALTU01                                                *
*---------------------------------------------------------------------*

TABLES: T087.

* Table of valid evaluation gruops in Configuration menu.
DATA: BEGIN OF ZORD OCCURS 100.
          INCLUDE STRUCTURE T087.
DATA: END     OF ZORD.

* Index for a line of ZORD.
DATA: L_INDEX LIKE SY-INDEX.

* Key for binary read of table ZORD.
DATA: BEGIN OF KEY_ZORD.
```

```
          INCLUDE STRUCTURE T087.
DATA: END    OF KEY_ZORD.

* Is table ZORD full with data.
* ZORD is only filled first time.
  DESCRIBE TABLE ZORD    LINES L_INDEX.
  IF L_INDEX = 0.
    SELECT * FROM T087 INTO TABLE ZORD.
  ENDIF.

* Evaluation of first evaluation group.
  IF NOT I_ANLA-ORD41 IS INITIAL.
*   Fill Key_ZORD.
    MOVE SY-MANDT       TO KEY_ZORD-MANDT.
    MOVE I_ANLA-ORD41 TO KEY_ZORD-ORD4X.
    MOVE '1'              TO KEY_ZORD-ORDNR.

*   Read Table ZORD.
    READ TABLE ZORD WITH KEY KEY_ZORD BINARY SEARCH.

*   Entry of evaluation group does not exist.
    IF SY-SUBRC <> 0.
      E_ANFMKZ = 'E'.
      E_ARBGB  = '00'.
      E_MSGNR  = '058'.
      E_ANFMV1 = SPACE.
      E_ANFMV2 = SPACE.
      E_ANFMV3 = SPACE.
      E_ANFMV4 = SPACE.
*
      EXIT.
    ENDIF.
  ENDIF.
```

Checks during Posting

Starting with Release 2.1D, you can carry out expanded checks when posting to an asset. In order to use this facility, follow the steps below:

- Set the indicator "Individual check required" for the transaction types that you want to use within the framework of your customer enhancements *(Asset Customizing menu: Transactions -> Transaction types (OA81).*
- Adapt the function module EXIT_SAPLAINT_001 to your individual needs.
- Aktivate the project AINT0001 using the function *Project management of SAP enhancements* (CMOD).

The function module EXIT_SAPLAINT_001 offers the following parameters for individual checks:

- I_ANLA - Asset master record
- I_BWASL - Transaction type key.

In order to handle possible inconsistencies in the posting transactions, you must program the output of error messages yourself in the function module. The standard program does not otherwise react to inconsistencies, and the function module does not allow for return parameters.

The function module EXIT_SAPLAINT_001 that is cited below contains an include named ZXINTU01. You must create this include yourself and provide it with your own individual program flows. You must use the name given in order for all the data transferred to the customer function module to be available.

Example

You want to prevent a leased asset from being scrapped. The include you program yourself would then look approximately as follows:

```
*---------------------------------------------------------------------*
* INCLUDE ZXINTU01.
*---------------------------------------------------------------------*
* Leased Asset.
IF I_ANLA-ANLTP = '1'.
  MESSAGE ID 'ZZ' TYPE 'E' NUMBER '999'.
ENDIF.
```

Definition of Manual Revaluation

The enhancement project ARVL0001 serves the determination of the revaluation amount for an asset. The transfer structure I_ANLAV makes all master data fields available, as well as the contents of all fields that are valid on the report date in the table ANLZ (time-dependent data).

The transfer structure I_ANLC contains the value fields for the depreciation area that is the base depreciation area for revaluation. This transfer structure delivers the base amount for the determination of revaluation.

You must specify the formula for determining revaluation in the function module EXIT_RAAUFW01_001. In addition, you must also assign the revaluation amount that is determined to the field E_ABTRG, and the base amount for revaluation to the field E_BBTRG.

Example:

E_ABTRG = I_ANLC-KANSW * 10 / 100.

E_BBTRG = I_ANLC-KANSW.

The program RAAUFW01 lists both values. Batch input is created for planning the revaluation.

Long Text Output in Reporting

In AM reporting, the sorting and totalling of data records is determined by so-called sort versions. You can either use the sort versions that are delivered with the standard system, or you can define your own sort versions.

A sort version primarily consists of a sort key that is made up of a maximum of 5 fields from the dictionary structure ANLAV. The data records selected in a report are them sorted according to these fields, and totals are created at the control level.

The report also displays a long text at the control level. For example, if totals are created for the data records in an asset class, the name of the asset class is read and displayed. This reading of such long texts is already programmed in the fields used in the standard sort versions. You should only program this reading of texts yourself with the help of the modification project ANLR0001 if

- you have defined your own sort versions,
- in which you have used fields that do not appear in any of the standard sort versions and
- these fields have texts that you need.

Then you can also display control level texts for these fields in the report. Follow the procedure below:

1. Adapt the function module EXIT_SAPLANLR_001

   The function module EXIT_SAPLANLR_001 is called up from asset reporting. The function module receives all the data necessary for determining the text in its import parameters:

   - I_FIELDNAME : Field name root for the ANLAV field
   - I_CONTENT : Field contents
   - I_BUKRS : Company code (if needed to find the text)
   - I_AFABE : Depreciation area (if needed to find the text),
   - I_OFFSET : Offset of the relevant field contents at beginning of field
   - I_LAENGE : Length of the relevant field contents.

   The function module then supplies (in the parameter E_BEZ) the text that belongs to this field content to asset reporting. The source text for this function module consists primarily of the Include program ZXANLU01. You program the reading of this text by using this parameter in the include program ZXANLU01. You may need to first create this include program for this purpose.

2. Using the SAP enhancement ANLR0001 in a project

   The function module EXIT_SAPLANALR_001 is a component of the SAP enhancement ANLR0001. Include the enhancement ANLR0001 in a project with the function *Project management of SAP enhancements* (transaction CMOD), and activate this project.

Example

You create a sort version, in which the fields ANLAV-ORD41 and ANLAV-ORD42 appear (evaluation groups 1 and 2 in the asset master record). Since these fields do not appear in any of the standard sort versions, you must program the reading of the control level text from the text table T087T in the include programm ZXANLU01 yourself. For this purpose, you need to enter the log-on language SY-LANGU and the field contents I_CONTENT. If it is possible to successfully transmit a text, you must set up the export parameter E_BEZ.

```
*---------------------------------------------------------------------*
* INCLUDE ZXANLU01.                                                   *
*---------------------------------------------------------------------*

  TABLES: T087T.
```

```
CLEAR E_BEZ.

CASE I_FIELDNAME.
WHEN 'ORD41'.
  SELECT SINGLE * FROM T087T
     WHERE SPRAS = SY-LANGU
     AND   ORDNR = '1'
     AND   ORD4X = I_CONTENT.
  IF SY-SUBRC EQ 0.
     MOVE T087T-ORDTX TO E_BEZ.
  ENDIF.
ENDCASE.
```

It is also possible to include only the relevant part of a field rather than the complete field in the sort version (for example, for the field ANLAV-TXJCD the tax jurisdiction code). In this case, you also have to specify the offset and the length along with the field name in the definition of the sort version. When programming the locating of the text in the include program ZXANLU01, you must then make sure that the complete field contents are available in the parameter I_CONTENT. This is necessary so that the entries for offset and length made in the parameters I_OFFSET and I_LAENGE in the sort version are also taken into account.

In addition, it is also possible that the text is dependent on a company code or depreciation area. This information is in the parameters I_BUKRS or I_AFABE, and can be included when you program the locating of the text.

Currency Conversion in Asset Reporting

The central procurement and processing of data for an asset takes place in the logical data base ADA in the AM system. One of the functions that is carried out in the data base is currency translation. Currency translation for a currency that is different from the company code currency is carried out according to a translation method that you define in Asset Customizing *(Reporting)*.

If the parameters of this standard translation method do not meet your needs, you can define your own individual translation method using the enhancement project BADA0001. Follow the procedure outlined below:

1. Activate the enhancement project BADA0001.
2. Modify the function module EXIT_SAPDBADA_001. Enter your own individual coding in the included program ZXBADU01.
3. When the enhancement project is active, the system uses the function module for the translation of currency and includes the function module at the corresponding positions in the logical data base.
4. Define a translation method in Asset Customizing *(Reporting)* that uses the translation date 3 (individual translation).

The following transfer parameters are available for the function module EXIT_SAPDBADA_001:

- I_AMOUNT (amount in local currency)
- I_ANLAV (master data for the asset)
- I_AFABER (depreciation area)
- I_BERDATUM (report date)
- I_UMVAR (translation method)

The translated amount is expected as return value in the field E_AMOUNT. This value is then provided to the respective report.

Individual Asset Number in Reporting

The central procurement and processing of data for an asset takes place in the logical data base ADA in the AM system. One of the data fields is the field *ANLN0* (12 characters). This field contains the asset main number. You can, however, change this field using the enhancement project BADA0002. For example, you could set it up so that the inventory number is used instead of the asset number in all standard reports that use the logical data base. Follow the procedure below:

1. Activate the enhancement project BADA0002.
2. Modify the function module EXIT_SAPDBADA_002. Enter your own indivdual coding in the included program ZXBADU02.

The asset master data (I_ANLAV) are available as transfer parameter to the function module EXIT_SAPDBADA_002.

The return value (E_CUSANLN1) is expected as the replacement value for the asset number. This value is provided to the respective reports.

Glossary

Account allocation

The ACCOUNT ALLOCATION determines the accounts that are automatically posted in Financial Accounting as the result of an AM transaction. You define the account allocation for each company code and depreciation area.

Acquisition and production costs

The ACQUISITION AND PRODUCTION COSTS represent the upper limit on valuation of an ASSET in the balance sheet. For a purchased asset, the acquisition costs include all expenses related to the purchase, including incidental costs, less any reductions. For an acquisition from in-house production, the production costs include the costs of material, including matrial overhead costs, the cost of labor, including indirect labor costs, as well as special direct costs of production and administrative costs (can be included).

Asset

An ASSET is an object, a right, or other ecomomic value that provides continuing benefit to a business enterprise. The development of the value of an particular asset can be represented individually.

Asset accounting subsidiary ledger

The ASSET ACCOUNTNG SUBSIDIARY LEDGER is a ledger in Financial Accounting for representing developments in the value of ASSETs.

Asset class

The ASSET CLASS is the main criterion for classifying the asset portfolio according to business and legal requirements. You define the control parameters and the default values for the calculation of depreciation in the asset class, along with other master data. Every asset master record must belong to an asset class.

Asset history sheet

The ASSET HISTORY SHEET is an evaluation of the asset portfolio at the close of the fiscal year. The asset history sheet is normally a required appendix to the balance sheet. It provides an overview of the development of the values of the individual asset balance sheet items, as well as expenses for additions to assets.

Asset main number

The ASSET MAIN NUMBER explicitly represents a simple ASSET (without ASSET SUB-NUMBERs) in the system.

Asset sub-number

The ASSET SUB-NUMBER, in combination with the ASSET MAIN NUMBER, explicitly represents an asset in the system. Using asset sub-numbers, it is possible to represent a complex fixed asset in the system. The asset main number represents the complex fixed asset, and the sub-numbers represent the individual parts of the asset. Separate master data must be specified for each sub-number.

Asset value date

The ASSET VALUE DATE is the value date of an asset transaction from the point of view of Asset Accounting. The system uses the asset value date, in conjunction with the TRANSACTION TYPE and the DEPRECIATION KEY, to determine the beginning and ending period for the calculation of depreciation.

Asset view

The ASSET VIEW defines the field groups and the depreciation areas that are accessible to a given user. By assigning the user a particular asset view in the user master record, you provide the user with authorization for certain field groups. In addition, you specify when defining the DEPRECIATION AREA, whether the area can be maintained by users with the particular asset view.

Backlog calculation

BACKLOG CALCULATION is the revaluation (appreciation or devaluation) of the accumulated depreciation from the past due to a change in the REPLACEMENT VALUE of the asset.

Business area

A BUSINESS AREA is an organizational, but not legally independent, unit within accounting, for which internal reports are created.

Capital lease method

The CAPTIAL LEASE METHOD is used to capitalize leased ASSETs for the amount of the present value of the future lease payments.

Chart of accounts

A CHART OF ACCOUNTS is systematically ordered list, defined according to accounting principles, of all G/L account master records and cost elements. The chart of accounts contains the account number, account name, and control information for each G/L account master record. Several charts of accounts can be created per client. Each company code must be assigned to one chart of accounts.

Chart of depreciation

The CHART OF DEPRECIATION contains the defined DEPRECIATION AREAS. You specify the control parameters for these depreciation areas per chart of depreciation. Each company code is assigned to one chart of depreciation. A chart of depreciation can be used by more than one company code. The company code can either use the chart of depreciation and the CHART OF ACCOUNTS independently, or there can be a hierarchical relationship between the chart of accounts and the chart of depreciation (several charts of depreciation using one chart of accounts).

Client

A CLIENT is a legally and organizationally independent unit on the highest level of the R/3 System, for example, a group or a corporation.

Company code

A COMPANY CODE is an independent accounting unit within a CLIENT.

Corporate group

A CORPORATE GROUP is an affiliation of legally independent companies under the common management of a controlling company. The corporate group is required to create consolidated financial statements.

Cut-off value

The CUT-OFF VALUE is the value at which depreciation ends for specific depreciation methods.

Depreciation

DEPRECIATION is the reduction in the book value of an ASSET due to diminishing value. Depreciation serves to distribute the acquisition and production costs of the asset over its useful life.

Depreciation area

A DEPRECIATION AREA serves to represent the valuation of an ASSET for a specific purpose (for example, book depreciation, tax depreciation or cost-accounting depreciation). In addition to 'real' depreciation areas, you can define derived depreciation areas with values that are calculated from two or more real depreciation areas.

Depreciation key

A DEPRECIATION KEY defines the calculation of depreciation. The depreciation key controls, per ASSET and DEPRECIATION AREA, the calculation of planned depreciation and INTEREST, and the maximum percentage rate for manual depreciation.

Depreciation type

The DEPRECIATION TYPE classifies the various adjustments to the value of an asset according to the reason for the value adjustment. The following depreciation types are available in the system:

- ORDINARY DEPRECIATION
- SPECIAL DEPRECIATION
- UNPLANNED DEPRECIATION
- TRANSFER OF RESERVES
- INTEREST

Downpayment

A DOWNPAYMENT is a payment for a service not yet provided. Downpayments are identified in the balance sheet separately from other receivables or payables. A differentiation is made between downpayments made (identified in current and non-current assets) and downpayments received (identified with payables).

Fiscal year

A FISCAL YEAR is a time period of twelve months, for which the business enterprise regularly carries out an inventory and creates a balance sheet. The fiscal year can be the same as the calendar year, but does not have to be (non-calendar fiscal year). In certain circumstances, it is also possible to have a fiscal year of fewer than twelve months (SHORTENED FISCAL YEAR).

General ledger

The GENERAL LEDGER is the financial accounting ledger that is defined for the creation of the legally required closing reports.

Insurance type

An INSURANCE TYPE is a criterion for differentiating between insurances according to the type of risk that is covered.

Interest (imputed)

Imputed INTEREST represents the interest lost on the capital tied up in fixed assets.

Investment support measures

An INVESTMENT SUPPORT MEASURE is a subsidy or grant provided by the state to support specific types of investment. You represent the amount of this subsidy in a separate depreciation area in the system. You can manage investment support as either a reduction of the acquisition value on the assets side of the balance sheet, or as a special reserve on the liabilities side.

Leasing type

The LEASING TYPE controls the posting of acquisitions of leased ASSETs. In addition to the TRANSACTION TYPE to be used, the leasing type contains other essential posting parameters (such as the document type).

Ledger

A specialized framework for displaying transaction figures in a way that is relevant for a certain area of accounting and certain reporting or evaluation purposes.

Lessor

A LESSOR is a business partner, with whom a business relationship exists in regard to use of material that is limited by time.

Line items

LINE ITEMS provide detailed proof of the amounts posted to an ASSET. A line item is created for every asset transaction for every depreciation area that is posted. The line item contains the TRANSACTION TYPE, the ASSET VALUE DATE, the amount posted, the depreciation and interest on the transaction, and, if applicable, the PROPORTIONAL VALUE ADJUSTMENTS.

Master area

The MASTER AREA is the depreciation area that manages the values for the trade balance sheet. The master area is always the first area in the CHART OF DEPRECIATION. This area cannot take over values from other areas.

Ordinary depreciation

ORDINARY DEPRECIATION is the planned distribution of the acquisition costs of an asset over its useful life by means of a given depreciation method. Ordinary depreciation provides for the representation of the reduction in the value of the asset due to wear and tear in the course of normal use. Therefore, the calculation of periodic depreciation is based on the average useful life.

Period control

PERIOD CONTROL determines the start of depreciation at the time of an asset acquisition, and the end of depreciation at the time of an asset retirement. For acquisitions in particular, you are allowed (according to the laws of many countries) to use various conventions for determining the start date for depreciation (ASSET VALUE DATE).

Plant

A PLANT is an organizational unit that represents a production facility within a business enterprise.

Post-capitalization

POST-CAPITALIZATION is the correction of asset book values that were too low, due to a capitalization that was not carried out in the past.

Posting period

A POSTING PERIOD is a time period within a fiscal year, for which transaction figures can be updated.

Reconciliation account

A RECONCILIATION ACCOUNT is a G/L account, the details for which are provided in a subsidiary ledger, and which ensures the agreement between the subsidiary ledger and the general ledger.

Replacement value

The REPLACEMENT VALUE is a valuation of the asset that differs from the ACQUISITION AND PRODUCTION COSTS by being related to the current cost of replacing the asset. The replacement value of the asset is affected, for example, by inflation or technological advances.

Revaluation

REVALUATION is an increase in the historical acquisition costs of an asset to balance out reduction in the value of currency due to inflation. Using revaluation, it is possible to revalue the asset with a REPLACEMENT VALUE (that is different from the acquisition and production costs.)

Shortened fiscal year

A SHORTENED FISCAL YEAR occurs when there is a shift in the cycle of FISCAL YEARs. The shortened fiscal year provides for the time period between the end of the last fiscal year using the old cycel, and the new fiscal year using the new cycle.

Special depreciation

SPECIAL DEPRECIATION is depreciation allowed by tax law. In general, this form of depreciation allows for depreciation at a specific percentage over a tax concession period, without taking the actual wear and tear on the asset into account.

Special reserves

SPECIAL RESERVES are a special posting on the liabilities side of the balance sheet, that arise from the difference between depreciation for tax purposes and book depreciation. These tax-free (open) reserves, that are allowed to be created according to tax regulations from the untaxed profit, but that must be taxed in later periods, must be separately identified in the balance sheet as special reserves.

Takeover of old assets data

The TAKEOVER OF OLD ASSETS DATA is the transfer of data from a previous (non-SAP) system. Included in this transfer are the asset master records, the balances in the appropriate balance sheet accounts, and the transactions from the beginning of the fiscal year up to the productive start.

Transaction type

The TRANSACTION TYPE classifies the transactions that affect assets (for example, acquisition, retirement, transfer, and so on), and defines the processing of these transactions in the system.

Transfer of reserves

The TRANSFER OF RESERVES is the transfer of undisclosed reserves that arise when an asset is sold to replacement assets. The gain from the sale of the asset thereby reduce the acquisition and production costs of the new asset.

Unplanned depreciation

UNPLANNED DEPRECIATION is a value adjustment due to a foreseen ongoing reduction in the value of the asset. If the reasons for the unplanned depreciation are no longer valid at a later point, then a WRITE-UP is required to restore the value of the asset to the correct level.

Proportional value adjustments

PROPORTIONAL VALUE ADJUSTMENTS apply to the retirement of assets, and represent the depreciation (or write-ups) calculated for the asset up to the point of retirement.

Valuation of net assets

The VALUATION OF NET ASSETS is the valuation of the asset portfolio according to net worth tax criteria. The property values can be managed in a separate DEPRECIATION AREA.

Write-up

A WRITE-UP reverses the effect of depreciation from the past. Write-ups are required when past depreciation was too high, or if the reasons for UNPLANNED DEPRECIATION not valid for the expected length of time.